Regulatory Impact Analysis

Setting and Adjusting Patent Fees
in accordance with
Section 10 of the Leahy-Smith America Invents Act

Final Rule

U.S. Department of Commerce
United States Patent and Trademark Office
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Table of Contents

1 EXECUTIVE SUMMARY

1.1 Purpose

The rulemaking to set and adjust patent fees is economically significant and results in a need for a Regulatory Impact Analysis (RIA) under Executive Order 12866 Regulatory Planning and Review, 58 FR 51735 (Oct. 4, 1993). This document presents an RIA for this rulemaking for setting or adjusting patent fees in accordance with section 10 of the Leahy-Smith America Invents Act (Act or AIA). The AIA grants the Director of the United States Patent and Trademark Office (USPTO or Office) authority to set or adjust by rule patent fees established, authorized, or charged under Title 35 of the United States Code (U.S.C.). Patent fees may be set or adjusted only to recover the aggregate estimated cost of the Office's patent operations, including administrative costs. This RIA reviews the alternatives considered for the patent fee schedule presented in the final rulemaking (*see* "Setting and Adjusting Patent Fees" available at http://www.uspto.gov/aia_ implementation/fees.jsp#heading-1) and considers the qualitative costs and benefits of the fee schedule in the final rule and the three alternatives that the Office compared to the Baseline (status quo or current fee schedule). The Office did not receive any timely written comment submissions related to the RIA in response to the notice of proposed rulemaking (NPRM).

1.2 Conclusion

This RIA concludes that the overall qualitative benefits to patent applicants, patent holders, other patent stakeholders, and society of the final fee schedule (i.e., Alternative 1 herein) over five years are significant (*see* Table 1-1).

Table 1-1

Final Patent Fee Schedule Costs and Benefits, Cumulative FY 2013 – FY 2017	
Transfers	
Transfers	$13,993 million
Qualitative Costs and Benefits	
Costs	
Cost of patent operations	*Minimal*
Lost patent value from a decrease in patent applications	*Minimal*
Benefit	
Increase in private patent value from a decrease in pendency	*Significant*
Fee Schedule Design Benefits (Significant, Moderate, Not Significant)	*Moderate*
Decreased Uncertainty Effect (Significant, Moderate, Not Significant)	*Significant*
Net Benefit	***Significant***

Applicants can expect an increase in the average value of a patent, which stems from a decrease in patent application pendency (the time it takes to have a patent application examined). The Office estimates that total patent application pendency will decrease by 11.3 months during the time period of this analysis (FY 2013 – FY 2017), thereby permitting a patentee to obtain a patent sooner than he or she would have under the Baseline (status quo fee schedule). This RIA also concludes that the final fee schedule has qualitative benefits related to the fee schedule design and reduced uncertainty in the scope of patent rights. Moreover, the final fee schedule achieves the strategies and goals of the rulemaking, as described in Part III of the final rule and section 1.3 of this RIA.

The qualitative costs of the final fee schedule are relatively small in comparison to the qualitative benefits. These costs only marginally reduce the benefits discussed above and will be paid for through a transfer of fee revenue (i.e., money transferred to the USPTO by

patent applicants and patent holders) to the Office (*see* section 3). These costs reflect an increase in the cost of patent operations associated with: (1) the increased patent examination capacity to work on the large backlog of patent applications in inventory, thus reducing patent application pendency; and (2) building a three-month patent operating reserve to support a sustainable funding model that will aid the Office in maintaining shorter pendency and an optimal patent application inventory in order to effectively employ the USPTO workforce.

When examined against the Office's strategies and goals, this RIA found the net benefits of the final fee schedule to be superior to the net benefits of the other alternatives considered because the overall benefit of reducing patent application pendency helps to advance commercialization of new technologies and thereby support job creation.

1.3 Statement of Need for Action

The USPTO is issuing a final rule using the fee setting authority in section 10 of the AIA to set or adjust patent fees to secure sufficient aggregate patent fee revenue for the Office to recover its aggregate cost of patent operations, including administrative costs, for implementing a sustainable funding model, decreasing patent application pendency (the time it takes to have a patent application examined), and reducing the patent application backlog (inventoried patent applications awaiting examination), improving patent quality, and upgrading the Office's patent business information technology (IT) capability and infrastructure. Under this final rule, the Office sets fees for micro entities under section 10(b) of the Act (75 percent discount). The design of the final fee schedule also furthers key

policy considerations. For example, the final rule includes multipart and staged fees, both of which increase patent prosecution options for applicants.

A steady increase in patent application workload and insufficient hiring levels over many years due to funding shortfalls has led to significantly longer patent application pendency and a large backlog of patent applications in inventory. A large backlog of patent application inventory delays the delivery of patented innovations to market, whereas an optimal patent application inventory level allows for the prompt examination of applications relative to the examination capacity of the USPTO's examination staff. Long patent application pendency negatively affects private patent value and increases uncertainty for both patent-seeking inventors and other technology innovators interested in understanding the competitive environment, but does not have a material effect on the level of public disclosure, as discussed further in section 2.1.

Since 1982, the patent fees that generate most of the patent revenue (e.g., filing, search, examination, issue, and maintenance fees) have been set by statute, and the Office could only adjust these fees to reflect changes in the Consumer Price Index (CPI) for All Urban Consumers, as determined by the Secretary of Labor. Because these fees were set by statute, the USPTO could not realign or adjust fees to quickly and effectively respond to market demand or changes in processing costs other than for the CPI. Over the years, these constraints led to funding variations and shortfalls. During that same period, year-to-year application workload increased by over 300 percent. Section 10 of the AIA changed this fee setting model and authorized the USPTO to set or adjust patent fees within the regulatory process so the Office would be able to respond to its rapidly growing workload better.

The rulemaking related to this RIA responds to this rapidly growing workload and is guided by strategies consistent with the Office's goals and obligations under the AIA. Specifically, the overall strategy of the rulemaking is to ensure that the fee schedule generates sufficient revenue to recover aggregate costs; another strategy is to set individual fees to further key policy considerations while taking into account the cost of the particular service. As part of the overall strategy, the fee schedule set forth in the final rule (Alternative 1) will provide sufficient revenue to achieve two significant USPTO goals: (1) implement a sustainable funding model for operations; and (2) optimize patent timeliness and quality. Implementing a sustainable funding model for operations includes continuing to build a three-month patent operating reserve to allow effective management of the U.S. patent system and responsiveness to changes in the economy, unanticipated production workload, and revenue. Optimizing patent quality and timeliness includes ensuring the quality of patent application review and reducing patent application pendency. The strategy of setting individual fees is to further key policy considerations: (1) *fostering innovation*; (2) *facilitating effective administration of the patent system*; and (3) *offering patent prosecution options for applicants*.

The final fee schedule strategies and goals are consistent with the strategic goals and objectives detailed in the *USPTO 2010-2015 Strategic Plan* (Strategic Plan) that is available at http://www.uspto.gov/about/stratplan/USPTO_2010-2015_Strategic_Plan.pdf, as amended by Appendix #1 of the USPTO FY 2013 President's Budget (Budget) that is available at http://www.uspto.gov/about/stratplan/budget/fy13pbr.pdf (collectively referred to herein as "strategic goals"). The Strategic Plan defines the USPTO's missions and long-

term goals and presents the actions the Office will take to realize those goals. The significant actions the Office describes in the Strategic Plan that are specific to the goals of this rulemaking are implementing a sustainable funding model, reducing the patent application backlog and pendency, and improving patent quality and IT capabilities.

Likewise, the fee rulemaking strategies and goals support the *Strategy for American Innovation* – an Administration initiative first released in September 2009, and updated in February 2011, that is available at http://www.whitehouse.gov/innovation/strategy. The *Strategy for American Innovation* recognizes innovation as the foundation of American economic growth, leading to the creation of high-paying jobs and national competitiveness, and that public support for a workable intellectual property (IP) rights system is one of the fundamental ways that government supports innovation. Economic growth in advanced economies like the United States (U.S.) is driven by the creation of new and better ways of producing goods and services. This process triggers new and productive investments, which are the cornerstones of economic growth. Achieving the *Strategy for American Innovation* depends, in part, on the USPTO's success in reducing the patent application backlog and pendency – both of which stall the delivery of innovative goods and services to the market and impede economic growth and the creation of high-paying jobs.

1.4 Scope

Using section 10 of the AIA, the USPTO sets or adjusts patent fees established, authorized, or charged under Title 35 of the U.S.C. In all, the Office sets or adjusts 351 patent fees – 93 apply to large entities (hereinafter the reference to "large entity" includes all entities

other than small or micro entities); 94 apply to small entities; 93 apply to micro entities; and 71 apply irrespective of entity size.

This RIA for the final rule outlines the transfer and assesses the qualitative benefits and costs that accrue to patent applicants, patent holders, and other patent stakeholders in the United States, per the guidance in OMB Circular A-4.

The rulemaking does not impose different costs or burdens on applicants and patent holders based on their country of residence, i.e., United States or foreign. From FY 2007 through FY 2011, when application origin is determined by the residence of the first-named inventor, non-U.S. utility patent applications filed in the U.S. accounted for 49 percent, on average, of all utility patent applications. For informational purposes and where information is available, this RIA separately assesses impacts on non-U.S. (foreign) applicants and patent holders.

1.5 Points of Contact

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2 GENERAL INFORMATION

Developing this RIA required various data elements and methodologies to assess the alternatives. This section describes the:

- Overview of the patent system;
- Qualitative costs and benefits considered in this RIA;
- Key indicators used to assess qualitative costs and benefits and compare alternatives;
- Methodologies used to consider costs and benefits; and
- Assumptions and constraints regarding the methodologies used.

2.1 Patent System Overview

An analysis of the qualitative costs and benefits associated with the final fee schedule requires a basic understanding of the overall patent system. A detailed description of the patent process can be found on the USPTO Web site at http://www.uspto.gov/patents/process/index.jsp.

A U.S. patent is a property right granted by the Government of the United States of America to an inventor to exclude others from making, using, offering for sale, or selling an invention throughout the U.S. or importing the invention into the U.S. for a limited time in exchange for public disclosure of the invention when the patent is granted.

The U.S. economy depends on a balanced IP system that includes enforceable patents to provide incentives and benefits to conduct innovation. An efficient and effective patent system provides tools to protect new ideas and investments in innovation and creativity. Without timely, clear, and effective patent rights, the value of IP and capital decreases, and

uncertainty in the legal rights of new products increases. As a result, investments are either misdirected or not undertaken, and costly litigation is more likely to occur.

Patents promote and incentivize innovation by granting inventors certain short-term exclusive rights to their inventions. This limited exclusive right is intended to stimulate inventive activity in multiple ways. First, the exclusivity made possible by a patent incentivizes inventors to undertake research and development (R&D) and inventive labor. Second, an exclusive patent right incentivizes commercialization of an invention in the marketplace. That is, inventors may bring their inventions to market by self-commercialization or by either licensing (to earn royalties) or selling their inventions to other market participants (e.g., larger companies) who in turn commercialize that invention. Third, patent exclusivity provides a means for inventors to obtain capital financing (e.g., through venture capital) to self-commercialize. In exchange for exclusive rights to the invention, an inventor must disclose the invention to the public. Public disclosure of information helps avoid redundant R&D by others and promotes the dissemination of new technology and the development of innovations that build on current technology. A broad disclosure of the technology occurs when a patent application is published 18 months from the earliest effective filing date. A more specific disclosure on the scope of claims allowed occurs when the patent is granted. Changes in the fee rates and/or pendency are not expected to have a material impact on the level (or amount) of the broad public disclosure available at 18 months. As discussed in the elasticity supplement (*see* "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1), relatively few patent applications are expected to be impacted by changes in fees and/or pendency.

The economy benefits from new products and services that would not otherwise be invented. Patented technologies are the source of entirely new industries (e.g., semiconductors), help bring new products and services to market (e.g., drugs and medical devices), and support new job creation (*see* Intellectual Property and the U.S. Economy: Industries in Focus available at http://www.uspto.gov/news/publications/IP_Report_March_2012.pdf.) In this way, an effective and efficient patent system benefits both inventors and the economy, and is an important part of the *Strategy for American Innovation* (*see* section 1.3).

This RIA also includes qualitative costs and benefits related to certain policy considerations in fee schedule design that encourage innovation and facilitate public disclosure. The policy consideration of *fostering innovation* entails balancing fee schedule design elements related to reducing barriers to entry in the patent system (e.g., low front-end filing, search, and examination fees) with recovering some of the cost of patent application processing from back-end maintenance fees. The associated maintenance fee renewal rates also indicate how well the fee schedule *fosters innovation* by influencing the number of patents made available for subsequent commercialization. The policy considerations are discussed in more detail later in this RIA.

2.2 Qualitative Costs and Benefits Arising from Fee Adjustment

The overall impact of the costs and benefits arising from fee adjustment are difficult to monetize or quantify. Therefore, this RIA analyzes the change in qualitative costs or benefits using certain key indicators, when compared to the Baseline. There are two more

significant over-arching elements involved in assessing costs and benefits related to the overall patent system: (1) patent application pendency; and (2) the fee schedule design. Both are an integral part of the rulemaking's strategies and goals discussed in section 1.3. Each will be discussed in turn.

The pendency of patent applications impacts the value of the patent and the level of uncertainty related to innovation, as described below:

- ***Private Patent Value:*** Pendency reflects how quickly an application reaches final disposition (granted or abandoned), and when granted, influences how soon an invention is commercialized and the value of a patent. The sooner an applicant can obtain a granted patent, the sooner the patent holder can commercialize or otherwise obtain value from the exclusive right for the invention, thereby increasing the net present value of the patent, all else being equal. This RIA considers the expected private patent value in response to an increase or decrease in patent application pendency, when compared to the Baseline private patent value.

- ***Uncertainty:*** Pendency also affects the level of uncertainty in the innovation environment for the applicant and other potential innovators. In general, shortening the pendency period reduces uncertainty regarding the claimed invention and scope of patent rights for patentees, competitors, and new entrants. Reducing uncertainty has an overall positive impact in terms of clarity of patent rights, freedom to innovate, and the efficient operation of markets for technology. Economists have studied various aspects

of uncertainty in patent rights and overwhelmingly agree that reducing uncertainty is desirable for innovation.

The second important element in considering qualitative costs and benefits related to patents is the fee schedule design, which includes fee amounts, the relationship among the different fees, the estimated potential for the aggregate revenue to recover aggregate costs, and the ability to support the three key policy considerations of *fostering innovation, facilitating effective administration of the patent system,* and *offering patent prosecution options for applicants*. For example, setting filing, search, and examination fees below the Office's cost for the related services helps *foster innovation*. As another example, staging certain fees *offers patent prosecution options for applicants*.

2.2.1 Qualitative Costs Arising from Fee Adjustment

The specific qualitative costs that were used to assess the alternatives are described in greater detail below.

- ***Decreased Private Value of Patents from an Increase in Pendency:*** When patent application pendency increases, it takes longer for a patent holder to obtain exclusive rights, which may decrease the value of the patent, all else being equal. Longer pendency can also delay commercialization and licensing of the innovation because it is more difficult to license a non-patented invention due to uncertainty over the final claims and the scope of protection. This delay could decrease the private value of that patent, which is considered in this RIA to be a cost to a patent holder.

- ***Increase in the Office's Cost of Patent Operations:*** The Office considered a relative change in the cost of patent operations for each alternative, when compared to the Baseline. Additional incoming work (e.g., patent applications filed) typically arrives with a limited amount of additional revenue since the Office sets fees for initial prosecution activities below the cost to the Office. However, in response to incoming work, the Office would be required to expand the patent examination capacity, which would lead to an increase in the Office's costs (e.g., overtime, salaries, benefits, etc.). Therefore, the cost of the Office's patent operations varies across the four alternatives considered relative to the amount of revenue and resources available (fees generated plus operating reserve) to execute the operating requirements associated with the amount of work required. An increase in the Office's cost of patent operations is considered a cost.

- ***Lost Patent Value From a Decrease in Patent Applications Filed:*** Where an alternative increases filing, search, and examination fees, the Office expects that marginally fewer patent applications would be filed and in turn fewer patents that could be granted due to expected price elasticity of demand (referred to herein as price elasticity) (*see* "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" *available at* http://www.uspto.gov/aia_implementation/fees.jsp#heading-1 for a definition of price elasticity and how the Office applies this economic concept). Lost patent value represents the Office's assessment of the cost to society from the expected decrease in successful patent application filings (serialized applications) due to an increase in filing, search, and examination fees. The higher the increase in fees, the

larger the decrease in filings, the greater the loss in patent value, and the greater the loss to society of that foregone innovation.

- ***Fee Schedule Design Costs:*** The fee schedule design can affect how well each alternative achieves key policy considerations, as discussed previously. Some key policy considerations, such as *fostering innovation* and *facilitating effective administration of the patent system*, may impact individual patent applicants, patent stakeholders, or society in different ways. For example, the amount of information disclosed publicly (i.e., the publication of applications and patents) may change due to the number of patent applications filed, although, as discussed in section 2.1, the actual fees and/or pendency are not expected to have a material impact on the level or rate of public disclosure. The fee schedule design effects for an alternative are presented as a qualitative cost if, overall, the design primarily has a negative impact on policy considerations. The Office recognizes that the same effect may be viewed as either a cost or a benefit depending on the perspective of the affected entity (e.g., individual applicants, the Office, or society). Where applicable, this discussion includes opposing effects and attempts to categorize their relative rank to substantiate the overall assessment as a cost or a benefit.

- ***Increase in Uncertainty:*** An increase in patent application pendency results in longer uncertainty in terms of the clarity and scope of patent rights, which is expected to reduce the incentives and freedom to innovate. Patenting innovators can be expected to have fewer incentives to patent if delay interferes with their ability to earn profits from the invention. Other innovators working in the field of the patent application can be

expected to misdirect their investments since they would not know the final boundaries of the pending patent in a timely manner. For purposes of this analysis, the Office considers this effect a cost to the patent system because reduced innovation negatively impacts economic growth and the market for technology.

2.2.2 Qualitative Benefits Arising from Fee Adjustment

The type of qualitative benefits related to fee adjustment mirrors the costs described above. Only the direction of the change is different (for example, fee setting alternatives presented in this RIA impact average pendency differently). If an alternative reduces average pendency, the outcome is presented as a benefit; if average pendency increases, it is presented as a cost. The qualitative benefits that the Office used to assess the alternatives are described in greater detail below.

- ***Increased Private Value of Patents from a Decrease in Pendency:*** When patent application pendency decreases, the patent holder obtains exclusive rights sooner, which increases the present value of the patent. Shorter pendency can also facilitate faster commercialization and licensing of the innovation because it is more difficult to license a non-patented invention due to uncertainty. These effects increase the private value of that patent, which is considered a direct benefit to a patent holder and a general benefit to the IP system. To assess this benefit, the Office considered a representative Baseline value of current patents relative to the Baseline pendency and then compared it to the alternatives that would result in shorter pendency.

- ***Decrease in the Office's Cost of Patent Operations***: The Office considered a relative change in the cost of its patent operations for each alternative, when compared to the Baseline. Less incoming work (e.g., patent applications filed) typically means less revenue. In turn, the Office would provide fewer services with this reduced revenue, which would lead to a decrease in the Office's cost of patent operations. Therefore, the Office's cost of patent operations varies across the alternatives relative to the amount of revenue and resources available (fees generated plus operating reserve) to execute the operating requirements associated with the amount of work required. A decrease in the Office's cost of patent operations is considered a benefit.

- ***Fee Schedule Design Benefits:*** The fee schedule design can affect how well the alternative achieves key policy considerations, as discussed previously. Some key policy considerations, such as *fostering innovation* and *facilitating effective administration of the patent system*, may impact individual patent applicants, patent holders, other patent stakeholders, or society in different ways. For example, the amount of information disclosed publicly (i.e., applications and patented subject matter) may change due to the number of patent applications filed, or the maintenance fee renewal rates, which can affect how many patents are not maintained and thus their subject matter is made freely available in the public domain for subsequent commercialization. The effects of each alternative's fee schedule design are presented as a qualitative benefit if, overall, the design has a positive impact on policy considerations. The Office recognizes that the same effect may be viewed as either a cost or a benefit depending on the perspective of the affected entity (e.g., individual applicants, the Office, or

society). Where applicable, this discussion includes opposing effects and attempts to categorize their magnitude to substantiate the overall assessment as a cost or a benefit.

- ***Decrease in Uncertainty*:** A decrease in patent application pendency results in shorter uncertainty over patent scope, term, and rights, which is expected to increase the incentives and freedom to innovate, and decrease the delay in innovation. Patenting innovators can be expected to have greater incentive to patent if there is a reduction in the delay for their ability to earn profits from their inventions. Further, other innovators working in the field of the patent application can be expected to focus their investments since they know the final boundaries of the patent sooner. For purposes of this analysis, this effect is considered a benefit to the patent system because increased innovation would positively affect economic growth and the market for technology.

2.3 Key Indicators

The Office used key indicators to assess costs and benefits. The Office analyzed the change in indicator values of each alternative against the Baseline to determine whether the result was a cost or benefit, or to determine whether the alternative assisted in achieving the goals of the Office and the rulemaking. The text below describes the key indicators used in this RIA.

- ***Aggregate Fee Revenue/Cost of Patent Operations:*** The estimated aggregate fee collections by fiscal year are considered transfer payments (the total amount of money transferred to the USPTO by patent applicants and patent holders) (*see* section 3) and are used to inform the Office's cost of patent operations and the alternative's ability to

achieve the sustainable funding model goals (a three-month operating reserve). This indicator is useful because a change in incoming work or production levels (e.g., patent applications filed or production units completed) typically correlates with a change in revenue. The change also correlates with a change in the amount of services that would be provided, which in turn correlates with a change in the Office's cost of patent operations.

- ***Serialized Utility Application Filings:*** Serialized (new) applications represent the Office's estimates about new patent application filings (excluding requests for continued examination (RCEs) and reissues that are derivatives of original serialized applications). RCEs are requests to continue prosecution of an application. It is important to exclude RCEs in this key indicator because they are not new patent applications and consequently would not be affected by the changes in new application fees. The Office bases these estimates on an analysis of historical data and prospective economic indicators. The Office determined that serialized patent applications filed would be those most affected by changes in fees (i.e., responsive to price elasticity). The Office used this indicator to assess the lost patent value from a decrease in patent applications filed.

- ***First Action Average Pendency and Total Average Pendency:*** The USPTO measures pendency at two points in time. The first is the average time for the Office to issue a First Action on the Merits for a patent application. The first action average pendency was not used to assess any costs or benefits but relates to the Office's goal of optimizing patent quality and timeliness. The second is the average time from when a patent

application is filed to when it achieves final disposition (i.e., when granted by the Office or abandoned by the applicant). For purposes of this analysis, the Office used average total pendency as an indicator of the total time required to obtain a patent. The Office used this indicator to assess the change in private patent value from the Baseline and as an input into evaluating how a change in pendency affects uncertainty.

- ***Patents Granted:*** This indicator measures the number of patents granted (allowed), as estimated by the Patent Pendency Model (PPM). The number of patents granted reflects the volume of patent applications processed, when considering the estimated allowance rate. Consequently, this indicator is closely related to patent application pendency and the cost of patent operations. Granted patents are also considered to evaluate the change in private patent value.

- ***Maintenance Fee Renewal Rates (Stage 1, Stage 2, and Stage 3):*** Maintenance fees must be paid at defined intervals (stages) – 3.5 years, 7.5 years, and 11.5 years – after the Office grants a utility patent in order to keep the patent in force. The indicator measures the percentage of patent holders who pay the fee to maintain a patent in force at each of the three stages across the term of a patent. Patent owners must reassess the value of their patent at each stage and determine if that patent is at least as valuable as the fee. The Office used maintenance fee renewal rates to analyze how a change in maintenance fees (and resulting change in maintenance fee renewal rates) affects patents entering the public domain and the potential impacts on commercialization. The Office expects maintenance fee renewal rates to decrease when maintenance fees are increased, and this decrease in maintenance fee renewals could facilitate commercialization

because subject matter previously covered by a patent would become available in the public domain to improve upon and spur innovation. The Office defines maintenance fee renewal stages below:

- ***Maintenance Fee Renewal Rate – Stage 1:*** measures the percentage of patent holders who pay the patent maintenance fee 3.5 years after a patent is granted.

- ***Maintenance Fee Renewal Rate – Stage 2:*** measures the percentage of Stage 1 patent holders who pay the patent maintenance fee 7.5 years after the patent is granted. The effects of Stage 2 maintenance fee renewal rates are similar to Stage 1 maintenance fee renewal rates, although they are expected to be more sensitive to fee increases at this stage because the patent is even further along in its life cycle.

- ***Maintenance Fee Renewal Rate – Stage 3:*** measures the percentage of Stage 2 patent holders who pay the patent maintenance fee 11.5 years after the patent is granted. The effects of Stage 3 maintenance fee renewal rates are similar to Stage 2 maintenance fee renewal rates.

2.4 Methodology

Preparing this RIA required a consideration of the qualitative impact of several costs and benefits for each alternative. As discussed above, the Office used key indicators to assist in assessing the qualitative costs and benefits. This section presents five methodologies used to develop information for this RIA: 1) activity-based costing; 2) aggregate fee revenue

projections; 3) private value of patents; 4) lost patent value from a decrease in patent applications filed; and 5) cost of the Office's patent operations.

2.4.1 Activity-based costing

The activity-based costing (ABC) methodology is used when executing the fee setting strategy of setting individual fees to further key policy considerations while taking into account the cost of the particular service. The historical cost of a particular service is derived from the Office's Activity-Based Information (ABI). The ABI provides historical cost for activities and outputs for each individual fee using the ABC methodology. ABC is commonly used for fee setting throughout the Federal Government. Additional information about the methodology, including the cost components related to respective fees, is available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1 in the document titled "USPTO Section 10 Fee Setting – Activity-Based Information and Costing Methodology."

While the historical cost information (where available) was not used to directly assess any costs or benefits in this RIA, it allowed the Office to consider different fee amounts relative to cost. The ABI cost data also was used to guide some individual fee amounts in the cost recovery alternative (Alternative 2).

2.4.2 Aggregate Fee Revenue Projections

To estimate aggregate revenue (the total amount of money transferred to the USPTO by patent applicants and patent holders) for the Baseline and each alternative, the Office initially analyzed relevant factors and indicators to estimate prospective fee workload volumes (e.g., number of applications and requests for services and products) for the

five-year planning horizon (FY 2013 – FY 2017). Economic activity is an important consideration when developing workload and revenue forecasts for the USPTO's products and services because economic conditions affect the propensity of patenting activity, as most recently exhibited in 2009 when incoming workloads (e.g., patent application filings) and maintenance fee renewal rates declined.

Major economic indicators include the overall condition of the U.S. and global economies, spending on R&D activities, and investments that lead to the commercialization of new products and services. The most relevant economic indicator that the Office uses is the real gross domestic product (RGDP), which is the broadest measure of economic activity and is anticipated to grow approximately three percent for FY 2013. The Bureau of Economic Analysis (http://bea.gov) reports RGDP each year. The Office of Management and Budget (OMB) (http://www.whitehouse.gov/omb) forecasts RGDP each February in the Economic and Budget Analyses section of the Analytical Perspectives, and the Congressional Budget Office (CBO) (http://www.cbo.gov/) forecasts the indicator each January in the Budget and Economic Outlook. A description of the Office's methodology for using RGDP can be found in the section of the annual budget entitled, "USPTO Fee Collection Estimates/Ranges." *See* annual budget available at http://www.uspto.gov/about/stratplan/budget/index.jsp. These economic indicators correlate with patent application filings, which are a key driver of patent fee workloads. Economic indicators also provide insight into market conditions and the management of IP portfolios, which influence process requests for the year and post-issuance decisions to maintain patent protection.

When developing workload forecasts, the Office also considers other influential factors including non-domestic patent activity, legislation, process efficiencies, fee changes, and anticipated applicant behavior. Significant changes in non-domestic patent activity (e.g., inclination for applying for and/or maintaining patents) may indicate future adjustments in patent activity at the USPTO. The Office analyzes legislative changes, such as the AIA, to determine if patenting activity would be affected. For example, the AIA created a new class of applicants called "micro entities" that the Office accounted for in its estimates. A description of the calculation used to estimate the number of micro entities can be found in Part IV of the rulemaking. Lastly, the Office evaluates known process efficiencies to determine if workloads would be affected, e.g., if compact prosecution would decrease the demand for requests for extensions of time to reply to an examiner's action. After reviewing FY 2012 filing data and RGDP information available after the NPRM published, the Office lowered its estimates for the level of demand of patent products and services (application filing levels). In the NPRM, the Office projected a growth rate of 6.0 percent in FY 2013 – FY 2014; 5.5 percent in FY 2015 – FY 2016; and 5.0 percent in FY 2017. Based on actual filing data from FY 2012, the Office now believes that a projected growth rate of 5.0 percent for each of FY 2013 – FY 2017 is appropriate in this final rule. This means that aggregate revenue is reduced because somewhat fewer patent applications are projected to be filed.

Anticipated applicant behavior is assessed using an economic principle known as price elasticity, which for the purposes of this RIA, means how sensitive applicants and patentees are to fee (price) changes in terms of their decisions to pursue patenting. If elasticity is low enough (i.e., demand is inelastic), when fees increase, patent activities would decrease a

relatively small amount in response to increases in fees, and overall revenues would still increase. Conversely, if elasticity is high enough (i.e., demand is elastic), fee increases would produce a significant enough decrease in patenting activity to lower the Office's aggregate revenue. The Office applied elasticity adjustments to major fees, defined as those that have the most significant impact on patent services to stakeholders, related innovation, and patent revenue. A more detailed description of calculations for price elasticity is in the "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" available at http://www.uspto.gov/aia_implementation/
fees.jsp#heading-1.

The Office considers each of the aforementioned factors and data points (e.g., non-domestic patent activity, legislation, price elasticity, and new applicant distinctions) when estimating and projecting aggregate revenue. The Office also prepares a high-to-low range of fee collection estimates that includes a +/- five percent outer bound to account for the inherent sensitivity and volatility of predicting fluctuations in the economy and market environment, interpreting policy and process efficiencies, and developing fee workload and fee collection estimates from assumptions. The Office used a five percent confidence interval because historically the Office's actual revenue collections have typically been within five percent of the projected revenue. After calculating the five percent outer bounds, the Office identified the likely impacts of the changes in fee revenue. Potential impacts include changes in examination capacity, which affect the backlog and pendency goals, and changes to the operating reserve balance, which affect the sustainable funding goal. Additional detail about the Office's aggregate fee revenue estimates, including projected workloads by fee is

available in "USPTO Section 10 Aggregate Revenue Tables" at http://www.uspto.gov/aia_implementation/fees.jsp.

2.4.3 Private Value of Patents

To consider whether there is a gain or loss of private patent value, the Office used the change in total pendency as the basis to evaluate the change in patent value. The Office considered whether patent value would increase or decrease from a change in pendency under each alternative relative to the Baseline pendency and patent value.

To consider this change in private patent value, the Office recognizes that in applications where an RCE is filed in order to complete patent prosecution, the pendency would be longer than the average total pendency included in the key indicator tables in section 5. The Office estimated this increased pendency for the Baseline and each alternative. To do so, the Office started with the average total pendency (discussed previously) and applied a fixed ratio of average total pendency with RCEs to average total pendency for each alternative to account for additional pendency from applicants employing RCEs. This estimated adjustment of patent application pendency would be more consistent with the pendency that patent applicants experience when using RCEs.

2.4.4 Lost Patent Value from a Decrease in Patent Applications Filed

This RIA includes qualitative costs associated with an expected decrease in the number of patent applications filed in response to an increase in filing, search, and examination fees. The Office estimates that there may be some patent applications that would not be filed due to higher fees, and that some share of these unfiled applications also represents foregone

innovation. The Office assumes that if these unfiled applications had been granted, total private value would have increased consistent with the change of patent value. Thus, the Office considers the value of foregone patents as a loss in total patent value due to fee increases under each alternative. While it is possible that some share of the unfiled applications would have resulted in innovations protected by other methods (e.g., trade secrets), by assuming all of the unfiled applications would result in a loss of value, the Office is taking an inherently conservative approach.

To assess this loss, the Office applied elasticity estimates (*see* "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" available at http://www.uspto.gov/aia_ implementation/fees.jsp#heading-1 for a definition of elasticity and how the Office applies this economic concept) to the filing, search, and examination fee increases for each alternative to estimate the decline in expected serialized applications filed relative to the Baseline. As discussed in the Key Indicators section (*see* section 2.3), the Office estimated foregone applications only for serialized applications (new filings only, which exclude RCEs and reissues) in each fiscal year. The Office determined that the arrival of new (serialized) patent applications filed would be those most affected by changes in prices (i.e., by price elasticity). The percentage change in filing, search, and examination fees is different for each alternative and, therefore, the estimated decrease in serialized filings is different for each alternative. For analysis purposes, the Office relied on USPTO data to estimate that approximately 50 percent of applications not filed would have been granted when filed under the Baseline. This estimate is based on FY 2011 USPTO data indicating that approximately 50 percent of applications result in patent grants (this estimate is consistent with FY 2012 preliminary data on patent grant rates). The Office recognizes that

50 percent is a conservative (high) estimate as applicants would typically self-select the less valuable patent applications from filing. The grant rate for these less valuable patents would most likely be lower than 50 percent. This assumption is consistent with the basic economic understanding that buyers with lower expected value of the benefits associated with buying a service will be the ones less likely to pay for the service after the price rises. Applying this understanding to the patent context suggests that patent applicants who expect a lower value stream of profits from their invention would be less likely to file an application when fees are raised, because patent filing would not have a net positive balance, after taking the expected costs and benefits into account. The Office also determined that there could be a three-year lag between application and grant so that an application not filed in FY 2013 represents lost private value in FY 2015. The Office also considered domestic and foreign losses separately. Based on FY 2011 USPTO data, domestic grants account for 49 percent of total applications filed while foreign grants make up the remaining 51 percent (this estimate is consistent with preliminary FY 2012 data on patent grant rates).

2.4.5 The Office's Cost of Patent Operations

The basis for calculating the cost of patent operations is the routine USPTO budget formulation and planning process. The USPTO Budgets are a five-year plan (prepared annually) for carrying out base programs and implementing strategic goals and objectives. A description of the methodology for calculating prospective aggregate costs for patent operations can be found in Part IV of the rulemaking and in the USPTO Congressional Justification supporting the annual budgets available at http://www.uspto.gov/about/stratplan/budget/fy13pbr.pdf. The Office's cost of patent operations varies across the alternatives relative to the amount of revenue and resources available (revenue paid to the

USPTO through transfers from patent applicants and patent holders) to execute the budgetary operating requirements associated with the anticipated incoming amount of workload. The cost of patent operations (planned operating requirements) for Alternative 1 is the same as for Alternative 4, except that less would be deposited in the operating reserve in Alternative 1. Given that on average examination costs represent around 70 percent of the total patent operating costs, the Office concentrated on the change in these costs for estimating the cost of patent operations for the Baseline and Alternatives 2 and 3.

2.5 Assumptions and Constraints

2.5.1 Assumptions

General:

- All analysis of costs and benefits contained in this RIA is qualitative (rather than monetized) because, per OMB Circular A-4, the section 10 final rule is considered to be primarily a transfer from one group to another.

- The time horizon for the analysis is FY 2013 – FY 2017.

- The PPM was used to estimate patent production, workload, changes in backlog and pendency, and associated staffing levels for each alternative. A description of the PPM, including a simulation tool, is available for review at http://www.uspto.gov/patents/stats/patent_pend_model.jsp.

- The average growth of patent application filings is 5.0 percent for the Baseline over the period from FY 2013 through FY 2017. The Office estimates the growth in

application filings using a regression model with RGDP controls derived from the Congressional Budget Office, available at http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/120xx/doc12039/economictables[1].pdf. CBO prepared updated economic guidance in August 2012, temporarily altering its projection methodology to reflect heightened uncertainty over fiscal policy conditions and concerns. The August 2012 CBO estimates envision various economic scenarios instead of a single point estimate as CBO typically prepared. The Office also made calculations based on CBO's August 2012 estimates, and they had only a negligible impact on forecasts of the Office's workloads given the +/- 5 percent outer bounds.

- For calculating the across-the-board fee increase for Alternative 3, fiscal year CPI rates used, by year are (as estimated by the CBO at the time the NPRM published): 1.4 percent in 2013, 1.5 percent in 2014, 1.6 percent in 2015, and 2.0 percent in 2016. The CBO estimated these rates, and they are available at http://www.cbo.gov/sites/default/files/cbofiles/attachments/Jan2012_EconomicBaseline_Release.xls.

- Based on FY 2011 USPTO data and consistent with preliminary FY 2012 data on patent grants, the Office estimates that 49 percent of patent grants are domestic and 51 percent are foreign. This data is available at http://www.uspto.gov/about/stratplan/ar/2011/oai_05_wlt_00.html.

Lost Patent Value from a Decrease in Patent Applications Filed:

- The Office estimated that 50 percent of applications would have been granted under the Baseline. The Office anticipates that the 50 percent estimate would be the

maximum grant rate, as most applicants would self-select the less valuable patent applications from filing. This estimate was based on the Office's patent grant statistics from FY 2011. This data is available at http://www.uspto.gov/about/stratplan/ar/2011/oai_05_wlt_00.html.

Aggregate Fee Revenue:

- Based on an analysis related to the new micro entity class, the Office estimates that 31 percent of entities that claim small entity status would qualify as a micro entity for the 75 percent fee reduction. The rulemaking (*see* Part IV, Fee Setting Methodology) describes the calculation used to estimate the number of micro entities.

- The planned effective date for the new fee rates is 60 days after publication in the Federal Register, except for changes to the following fees, which will be effective on January 1, 2014: sections 1.18(a)(1), (b)(1), (c)(1), and (d)(1) (patent issue and publication fees); section 1.21(h)(1) (fee for recording a patent assignment electronically); sections 1.482(a)(1)(i)(A), (a)(1)(ii)(A), and (a)(2)(i) (international application filing, processing and search fees); and fees included in sections 1.445(a)(1)(i)(A), (a)(2)(i), (a)(3)(i), and (a)(4)(i) (international application transmittal and search fees).

2.5.2 Constraints

- Monetizing and quantifying certain impacts of patent fees on the economy and the rate of innovation are inherently difficult and limited by the availability of data. This

is due to the number of variables involved and the difficulty in predicting economic activity. Estimates appearing in this RIA should not be taken to mean that USPTO has calculated specific monetized costs or benefits for purposes of economic impacts. Rather, some dollar values appearing in this RIA are necessary for the Office to comply with the section 10 requirement that aggregate revenues recover aggregate costs for purposes of setting or adjust fees for patent services.

3 DESCRIPTION OF TRANSFERS

OMB Circular A-4 requires the Office to report estimated transfers separately and defines a transfer payment as monetary payments from one group to another that do not affect total resources available to society. For example, transfer payments include revenue collected through a fee, a surcharge in excess of the cost of services provided, and a tax. As stated in OMB Circular A-4: "Fees to government agencies for goods or services provided by the agency should not be considered a cost or benefit because the goods and services are already counted as government costs, and including them as private costs would entail double counting." *See* Regulatory Impact Analysis: Frequently Asked Questions (FAQs) at pg. 16 *available at* http://www.whitehouse.gov/sites/default/files/omb/circulars/a004/a-4_FAQ.pdf. Accordingly, the Office estimates the amount of transfer payments from patent applicants and patent holders (*see* section 4.3.3), but does not include this amount in the analysis of costs and benefits.

4 OVERVIEW OF ANALYSIS

4.1 Overview of Alternatives

The Office identified three alternative patent fee schedules in addition to the final fee schedule (Alternative 1) set forth in the final rule and assessed the qualitative costs and benefits of each against the current patent fee schedule (Baseline or status quo). The Baseline maintains the current fee schedule that became effective on October 5, 2012. Alternative 2 would set most large entity individual fees at the cost of performing the activities related to the particular service. Alternative 3 generally applies a 6.7 percent inflationary factor to the fee amounts effective prior to October 5, 2012. Alternative 4

includes the fee amounts in the Office's original proposal delivered to the Patent Public Advisory Committee (PPAC) on February 7, 2012. All alternatives implement the 75 percent discount for micro-entities, but the Baseline maintains the status quo fee schedule and does not include the micro-entity discount (because the Office would not be setting or adjusting patent fees using section 10 of the AIA).

Over the five-year period included in this analysis (FY 2013 – FY 2017), Alternative 4 would generate the most aggregate revenue, and Alternative 2 would generate the least (less than the Baseline). The final fee schedule (Alternative 1) would generate less revenue than Alternative 4 (5.0 percent less) and Alternative 3 (0.4 percent less), and more than the Baseline and Alternative 2. While the final fee schedule generates $62 million less in total aggregate revenue than Alternative 3 over the five-year planning period, it generates $68 million more in FY 2013 (permitting the Office to increase examination capacity during FY 2013 to reduce patent application pendency and backlog). Alternatives 1 and 4 provide a sufficient amount of aggregate revenue to implement both of the two significant USPTO goals of: (1) implementing a sustainable funding model for operations and (2) optimizing patent timeliness and quality (*see* section 1.3 of this RIA and Part III of the final rule). Alternative 1 gradually accumulates the operating reserve target by accumulating two months of patent operating expenses at the end of the five-year planning horizon (FY 2013 – FY 2017) and reaching the three-month patent operating reserve target in FY 2018, while Alternative 4 reaches the three-month patent operating reserve level more rapidly by FY 2016, placing a more significant financial burden on patent applicants and patent holders. Likewise, both Alternatives 1 and 4 achieve patent application pendency goals in FY 2016 (first-action) and FY 2017 (total). It is important for the Office to balance

accomplishing both goals together so that once it achieves the pendency goals, it has sufficient resources to maintain them. The Baseline and Alternative 3 also build the three-month patent operating reserve by FY 2017 and FY 2016, respectively, but do not generate sufficient aggregate revenue to also achieve the patent pendency goals by FY 2016 and FY 2017. Alternative 2 does not accomplish either goal of sustainable funding or optimizing patent timeliness.

Additional descriptive information about the Baseline and each alternative is included in section 4 of this RIA. A summary of the qualitative costs and benefits of the final fee schedule (Alternative 1) is provided below in section 4.2 and an overview of the costs and benefits of all alternatives as compared to the Baseline is provided in section 4.3.

4.2 Summary of the Final Fee Schedule (Alternative 1)

The Accounting Statement (as shown in Table 4-1) summarizes the qualitative benefits and costs as well as other impacts of the patent fee schedule (Alternative 1) set forth in the final rule. Overall, this final fee schedule (Alternative 1) has significant qualitative benefits to patent applicants, patent holders, other patent stakeholders, and society, with minimal qualitative costs to the Office.

Table 4-1

Agency/Program Office: United States Patent and Trademark Office **OMB #:** **Rule Title: Setting and Adjusting Patent Fees** **RIN#:** 0651-AC54 **Date:** 9/6/2012				
Category	***Primary Estimate***	***Minimum Estimate***	***Maximum Estimate***	***Source Citation***
	FY2013 – FY2017			
BENEFITS (*see* section 7.2 for a detailed explanation of benefits)				
Incremental Monetized Benefits	n/a	n/a	n/a	n/a
Incremental Quantified But Not Monetized Benefits	n/a	n/a	n/a	n/a
Incremental Unquantified (Qualitative) Benefits	The final fee schedule reduces patent application pendency from that which would have been achieved under the status quo fee schedule by approximately 11 percent. This significantly increases the value of patents by advancing commercialization of new technologies sooner and reduces uncertainty regarding the scope of patent rights, which *fosters innovation* and has a positive effect on economic growth. The fee schedule design is also improved over the status quo fee schedule to better support key policy considerations.			RIA Sections 7
COSTS (*see* section 6.2 for a detailed explanation of costs)				
Incremental Monetized Costs	n/a	n/a	n/a	n/a
Incremental Quantified But Not Monetized Costs	n/a	n/a	n/a	n/a
Incremental Unquantified (Qualitative) Costs	The cost of patent operations associated with the final fee scheduled is slightly higher than the Baseline to pay for the increased examination capacity required to reduce patent application pendency and build a three-month operating reserve to provide sustainable funding for the Office.			RIA Section 6

Agency/Program Office: United States Patent and Trademark Office **OMB #:** **Rule Title: Setting and Adjusting Patent Fees** **RIN#:** 0651-AC54 **Date:** 9/6/2012				
TRANSFERS (*see* section 3 for a detailed explanation of Transfers)				
Total Monetized Transfers: "On Budget"	$11,420	10,849	$11,991	RIA Section 3
From Whom to Whom	From patent applicants and patent owners to the U.S. Government			
Total Monetized Transfers: "Off Budget"	n/a	n/a	n/a	n/a
From Whom to Whom	n/a			n/a
Other Impacts				
Category	***Effects***			***Source Citation***
Effects on State, Local, and/or Tribal Governments	n/a			n/a
Effects on Small Businesses	Changes in patent fees can affect further innovation and commercialization by small entities. The patent fee schedule includes discounts for small and micro entities for certain fees. The estimated impact on small businesses is addressed in the Final Regulatory Flexibility Analysis.			Final Regulatory Flexibility Analysis (FRFA)
Effects on Wages	n/a			n/a
Effects on Growth	The impact of patent fee changes on fostering innovation, which helps drive economic growth, was an important factor in this analysis. The final fee schedule reduces pendency, resulting in a decrease in uncertainty. It also has a strong positive effect on the private value of patents.			RIA

The qualitative benefits of the final fee schedule (Alternative 1) are (1) an increase in the average value of a patent that stems from the decrease in patent application pendency, (2) improvements in the design of the fee schedule when bearing in mind key policy

considerations, and (3) the reduction in uncertainty associated with the scope of patent rights via decreased pendency.

As to the first benefit, the Office estimates that total patent application pendency will decrease by 11.3 months during the time period of this analysis. This permits a patentee to obtain a patent sooner than it would have under the Baseline (status quo fee schedule). When a patentee secures the exclusive right to the invention sooner, the private value of that patent increases.

Second, the design of the final fee schedule (Alternative 1) includes several changes that would better achieve policy goals than the current fee schedule. Specifically, the final fee schedule continues to *foster innovation* by keeping front-end fees below the Office's cost to minimize barriers to entry into the patent system. In addition, the total routine fees to obtain a patent (i.e., filing, search, examination, publication, and issue fees) will decrease by 23 percent relative to the current fee schedule after the second stage of the fee schedule goes into effect on January 1, 2014. Also, despite increases in some fees, applicants who meet the new micro entity definition will receive a 75 percent discount on fees and therefore pay less than the amount paid for small entity fees under the current fee schedule for 87 percent of the fees eligible for a discount under section 10(b). Likewise, small entities will receive a 50 percent discount on more fees than they do under the current fee schedule. This fee schedule (Alternative 1) also *fosters innovation* in society. The increase in maintenance fees is estimated to reduce maintenance fee renewal rates, which may affect the availability of the underlying subject matter for subsequent commercialization. Lastly, this fee schedule

(Alternative 1) provides additional *patent prosecution options for applicants* through multipart and staged fees for RCEs, appeals, and administrative trials.

Third, earlier certainty due to reduced pendency offers patentees confidence that their innovations will be protected by the patent system long enough to recoup their initial investments. Moreover, it allows patentees to make commercial investments with more certain knowledge about the timing for patent protection, and other capital investors to have more certainty over the scope of the investment they are being asked to make. Certainty over the boundaries of the patent right also gives other innovators that are considering doing R&D in the technology area more information, earlier, about what actions would constitute redundant and infringing innovation, and what actions would constitute a non-infringing improvement, thus allowing for more efficient allocation of society's scarce innovation resources earlier in time.

The qualitative costs of the final fee schedule (Alternative 1) include (1) the cost of patent operations and (2) the lost patent value from an estimated reduction in new (serialized) patent application filings.

As to the former, the cost of patent operations associated with this fee schedule (Alternative 1) is expected to be higher than the Baseline cost of patent operations. The additional funds will pay for: (1) the increased patent examination capacity to work on the large backlog of patent applications in inventory, thus reducing patent application pendency; and (2) gradually building the three-month patent operating reserve.

Regarding the latter, as patent filers adjust to the new fees, the Office expects that this fee schedule (Alternative 1) will result in a short-term moderate reduction in the growth of patent applications compared to the Baseline (i.e., application filings are expected to increase, but at a lower rate due to elasticity). The Office estimates that there will initially be a smaller year-over-year growth in application filing rates, however, will return to Baseline levels beginning in FY 2016. (*See* "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1 for a definition of price elasticity and how the Office applies this economic concept.)

In sum, based on the analysis of costs and benefits, the overall benefit of the final fee schedule is the most significant. For a minimal cost, it increases private patent value, better supports key policy considerations, and decreases uncertainty in the scope of patent rights for patentees and other innovators alike.

4.3 Overview of the Qualitative Costs and Benefits Across Alternatives

The Office selected Alternative 1 for the final fee schedule because the benefits significantly outweighed the costs, and it was superior to the Baseline and the other alternatives assessed for its ability to meet all of the rulemaking's strategies and goals. A high-level overview of the qualitative costs and benefits is presented below. Section 5 presents a more thorough description of each alternative, including the key indicators used to assess costs and benefits. Section 6 presents detailed information related to each qualitative cost for the years included in this analysis (FY 2013 – FY 2017). Correspondingly, Section 7 presents detailed information related to each qualitative benefit for the years included in this analysis

(FY 2013 – FY 2017). The Office identified qualitative costs and benefits for each alternative (*see* Table 4-2).

Table 4-2

COSTS AND BENEFITS					
Alternative: **Description**	**Baseline** **Status Quo**	**1** **Final Fee Schedule**	**2** **Fee Cost Recovery**	**3** **Across-the-Board Adjustment**	**4** **Initial Proposal to PPAC**
Key Indicators (*see* sections 2 and 5)					
Average First Action Pendency in FY 2016	12.6 months	10.5 months	21.2 months	12.6 months	10.5 months
Average Total Pendency in FY 2017	21.0 months	18.8 months	31.2 months	21.0 months	18.8 months
Total Serialized Application Filings FY 2013 – FY 2017	2.21 million	2.14 million	1.64 million	2.20 million	2.09 million
Total Patents Granted FY 2013 – FY 2017	1.52 million	1.58 million	1.26 million	1.52 million	1.58 million
Maintenance Fee Renewal Rate – Stage 1 (5 year average)	88.8%	85.3%	94.1%	88.4%	85.3%
Maintenance Fee Renewal Rate – Stage 2 (5 year average)	79.9%	76.9%	89.6%	79.2%	76.9%
Maintenance Fee Renewal Rate – Stage 3 (5 year average)	73.0%	66.8%	80.5%	72.4%	66.3%

COSTS AND BENEFITS					
Alternative: **Description**	**Baseline** **Status Quo**	**1** **Final Fee Schedule**	**2** **Fee Cost Recovery**	**3** **Across-the-Board Adjustment**	**4** **Initial Proposal to PPAC**
Qualitative Costs for FY 2013 – FY 2017 (*see* section 6)					
Decrease in Private Patent Value	N/A	*see benefits*	Significant	*see benefits*	*see benefits*
Increase in Cost of Patent Operations	N/A	Minimal	*see benefits*	Minimal	Moderate
Lost Patent Value	N/A	Minimal	Moderate	Minimal	Minimal
Overall Fee Schedule Design Costs	N/A	*see benefits*	Significant	*see benefits*	*see benefits*
Increase in Uncertainty from an Increase in Total Pendency Over Baseline as of FY 2017	N/A	*see benefits*	10.2 month increase over Baseline	*see benefits*	*see benefits*
Overall Costs	**N/A**	**Minimal**	**Significant**	**Minimal**	**Moderate**
Qualitative Benefits for FY 2013 – FY 2017 (*see* section 7)					
Increase in Private Patent Value	N/A	Significant	*see costs*	None	Significant
Decrease in Cost of Patent Operations	N/A	*see costs*	Moderate	*see costs*	*see costs*
Overall Fee Schedule Design Benefits	N/A	Moderate	*see costs*	Unchanged	Moderate
Decrease in Uncertainty from a Decrease in Total Pendency Over Baseline as of FY 2017	N/A	2.2 month decrease over Baseline	*see costs*	None	2.2 month decrease over Baseline
Overall Benefits	**N/A**	**Significant**	**Moderate**	**None**	**Significant**
Overall Net Benefits/Costs	**N/A**	**Significant Benefit**	**Significant Cost**	**None**	**Moderate Benefit**

Qualitative Costs

In Alternative 2, the Office estimates that patent application pendency will increase and the number of patents granted will decrease when compared to Baseline, which would result in a significant cost associated with reducing the private patent value. This reduction in private patent value is the direct result of reducing examination capacity to ensure aggregate costs equal aggregate revenue. The lower examination capacity also results in a lower cost of patent operations when compared to the Baseline, which is considered a benefit (discussed later).

This same data relationship holds true for Alternatives 1 and 4. The greater examination capacity that is used to reduce patent application pendency and increase the number of patents granted increases the cost of patent operations (considered a cost in this analysis). Another increase in the cost of patent operations is building the three-month operating reserve. Alternative 4 has a cost of operations that is greater than Alternative 1 because the three-month operating reserve is accumulated rapidly over four years (by FY 2016), instead of gradually over more than five years (by FY 2018), as with Alternative 1. Similarly, although the examination capacity for Alternative 3 is considered to be the same as the Baseline, the cost of operations is higher because the Office estimates that the three-month operating reserve will accumulate more rapidly in Alternative 3 than for the Baseline.

All alternatives have a cost associated with the lost patent value from an estimated decrease in patent applications filed. The cost for lost patent value in Alternative 2 is significantly higher than the other alternatives because the increase in patent application filing, search, and examination fees (to achieve cost recovery) is the highest. The Office estimates that

serialized applications filed in Alternative 2 would decrease from the Baseline by nearly 26 percent over the five-year period of the analysis, resulting in the largest cost in lost patent value. Although significantly less, Alternative 4 has the next highest cost related to the lost patent value because the increase in patent application filing, search, and examination fees is higher than Alternatives 1 and 3, but less than Alternative 2. This pattern holds true for Alternatives 1 and 3. The patent application filing, search, and examination fee increase for Alternative 1 is less than Alternative 4, but more than Alternative 3, and consequently the lost patent value would also be less than Alternative 4, but more than Alternative 3. The cost associated with the lost patent value for Alternative 3 is expected to be least.

For Alternative 2, the fee schedule design does not achieve the key policy considerations of *fostering innovation*, *effective administration of the patent system*, and *offering patent prosecution options to applicants*. In fact, the Office found that this fee cost recovery alternative negatively impacted the policy considerations currently in place under the status quo fee schedule. For example, increasing the initial patent application filing, search, and examination fees to cost recovery does not *foster innovation* but would instead create barriers to entry into the patent system, as evidenced by the cost associated with lost patent value. Also, under a cost recovery alternative (Alternative 2), maintenance fees would be lower, which would result in higher maintenance fee renewal rates. The higher renewal rates indicate that some patent owners may reevaluate their patent(s) at each stage and decide to retain their exclusive rights more often than they would under the Baseline fee schedule. In those circumstances, the subject matter of the patent would not be available in the public domain for others to use. The Office considers this result as a cost to society, because it may increase costs (e.g., licensing) for further innovation and commercialization.

Finally, the estimated increase in patent application pendency is expected to increase the uncertainty in the scope of patent rights, which is considered a qualitative cost to the patent system.

To summarize, the costs of Alternatives 2 are significant and the costs of Alternatives 1 and 3 are minimal. The costs of Alternative 4 are assessed at moderate because of the higher cost of patent operations.

4.3.1 Qualitative Benefits

The benefits related to private patent value of Alternative 1 are the same as the benefits of Alternative 4. The benefits are equal because the key indicator amounts for patent application pendency and patents granted (see section 2.3 for a description of key indicators) are the same. Under both alternatives, the Office estimates that it will achieve its 10-month average first action pendency goal in FY 2016 and its 20-month average total pendency goal in FY 2017. Likewise, with equal examination capacity, the Office estimates that it will grant the same number of patents over the five-year period of this analysis (over 1.5 million from FY 2013 – FY 2017). With the lowest estimated patent application pendency and highest estimated number of patents granted, Alternatives 1 and 4 have the most significant benefit of private patent value.

This data relationship also is true when comparing indicators for the Baseline and Alternative 3. The examination capacity for Alternative 3 is considered to be the same as that for the Baseline, therefore patent application pendency and the number of patents

granted does not improve for Alternative 3. Given that there is no improvement in pendency for Alternative 3, there is no change in the private patent value.

The fee schedule design and patent application pendency of Alternative 3 (across-the-board adjustment) is the same as the status quo fee schedule. Therefore, there are substantially no qualitative benefits when comparing Alternative 3 to the Baseline. By contrast, both patent application pendency and the fee schedule design improve with Alternatives 1 and 4. Given that pendency is the same in both alternatives, the benefits associated with the reduction in uncertainty associated with the scope of patent rights are the same. In addition, both alternatives improve the fee schedule design when compared to the Baseline (*see* sections 7.2.2 and 7.5.2). However, Alternative 1 has some additional improvements related to *offering patent prosecution options to applicants* over Alternative 4. For example, Alternative 1 provides for multipart RCE fees and an option for a $0 fee for recording assignments electronically. Alternative 4 excludes both of these options. While the qualitative benefits of Alternatives 1 and 4 are substantially the same, Alternative 1 provides for some additional fee design benefits.

To summarize, the benefits of Alternatives 1 and 4 are almost the same, with the fee schedule design of Alternative 1 slightly better than Alternative 4. However, the costs of Alternative 4 are higher. Therefore, the net benefit of Alternative 1 is greater than that of Alternative 4.

4.4 Transfer Estimates

The Baseline fee revenue for all patent fees was used to estimate the Baseline transfer amount. This is a reasonable Baseline estimate because these fees represent the patent status quo fee schedule, in the absence of rulemaking for setting or adjusting fees in accordance with AIA section 10.

Table 4-3, Table 4-4, and Table 4-5 compare the undiscounted and three and seven percent discounted amounts of transfers for each alternative to the Baseline. The Office calculates transfers as the total amount of money paid by patent applicants and patent holders to the Office over the Baseline estimate. Across undiscounted and three and seven percent discount rates, the Office estimates transfers to be the greatest for Alternative 4, when compared to the Baseline. Alternative 3 is the next highest for the undiscounted and three percent discount transfers, with Alternative 1 a close third place. When considering a seven percent discount rate, Alternative 1 is the second highest transfer amount, when compared to the Baseline, with Alternative 3 a close third. The Office estimates Alternative 2 to have a negative change, when compared to the Baseline. The negative change under Alternative 2 is a result of the decrease in the cost of the Office's patent operations due to an expected reduction in aggregate revenue. Aggregate revenue would decrease as a result of higher front-end fees which could create barriers to entry for applicants, thus reducing the number of patent applications to be filed and in turn generating revenue from back-end fees (e.g., patents that would be maintained).

Table 4-3

Patent Fee Transfers (Aggregate Fee Revenue) by Alternative - Undiscounted (dollars in millions)						
	FY 2013	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Baseline - Fee Revenue	$2,430	$2,690	$2,808	$2,903	$2,887	$13,718
Alternative 1: Final Fee Schedule – Set and Adjust Patent Fees - Fee Revenue	$2,479	$2,806	$2,871	$2,928	$2,909	$13,993
Transfer Amount from Baseline for Alternative 1	*$49*	*$116*	*$63*	*$25*	*$22*	*$275*
Alternative 2: Fee Cost Recovery - Fee Revenue	$2,246	$2,463	$2,434	$2,527	$2,589	$12,259
Transfer Amount from Baseline for Alternative 2	*($184)*	*($227)*	*($374)*	*($376)*	*($298)*	*($1,459)*
Alternative 3: Across-the-Board Adjustment - Fee Revenue	$2,411	$2,779	$2,897	$2,994	$2,974	$14,055
Transfer Amount from Baseline for Alternative 3	*($19)*	*$89*	*$89*	*$91*	*$87*	*$337*
Alternative 4: Initial Proposal to PPAC - Fee Revenue	$2,491	$2,973	$3,037	$3,098	$3,088	$14,687
Transfer Amount from Baseline for Alternative 4	*$61*	*$283*	*$229*	*$195*	*$201*	*$969*

Table 4-4

Patent Fee Transfers (Aggregate Fee Revenue) by Alternative - 3% Discount (dollars in millions)						
	FY 2013	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Baseline - Fee Revenue	$2,359	$2,536	$2,570	$2,579	$2,490	$12,534
Alternative 1: Final Fee Schedule – Set and Adjust Patent Fees - Fee Revenue	$2,407	$2,645	$2,627	$2,601	$2,509	$12,789
Transfer Amount from Baseline for Alternative 1	*$48*	*$109*	*$57*	*$22*	*$19*	*$255*
Alternative 2: Fee Cost Recovery - Fee Revenue	$2,181	$2,322	$2,227	$2,245	$2,233	$11,208
Transfer Amount from Baseline for Alternative 2	*($178)*	*($214)*	*($343)*	*($334)*	*($257)*	*($1,326)*
Alternative 3: Across-the-Board Adjustment - Fee Revenue	$2,341	$2,619	$2,651	$2,660	$2,565	$12,836
Transfer Amount from Baseline for Alternative 3	*($18)*	*$83*	*$81*	*$81*	*$75*	*$302*
Alternative 4: Initial Proposal to PPAC - Fee Revenue	$2,418	$2,802	$2,779	$2,753	$2,664	$13,416
Transfer Amount from Baseline for Alternative 4	*$59*	*$266*	*$209*	*$174*	*$174*	*$882*

Table 4-5

Patent Fee Transfers (Aggregate Fee Revenue) by Alternative - 7% Discount (dollars in millions)						
	FY 2013	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Baseline - Fee Revenue	$2,271	$2,350	$2,292	$2,215	$2,058	$11,186
Alternative 1: Final Fee Schedule – Set and Adjust Patent Fees - Fee Revenue	$2,317	$2,451	$2,344	$2,234	$2,074	$11,420
Transfer Amount from Baseline for Alternative 1	*$46*	*$101*	*$52*	*$19*	*$16*	*$234*
Alternative 2: Fee Cost Recovery - Fee Revenue	$2,099	$2,151	$1,987	$1,928	$1,846	$10,011
Transfer Amount from Baseline for Alternative 2	*($172)*	*($199)*	*($305)*	*($287)*	*($212)*	*($1,175)*
Alternative 3: Across-the-Board Adjustment - Fee Revenue	$2,253	$2,427	$2,365	$2,284	$2,120	$11,449
Transfer Amount from Baseline for Alternative 3	*($18)*	*$77*	*$73*	*$69*	*$62*	*$263*
Alternative 4: Initial Proposal to PPAC - Fee Revenue	$2,328	$2,597	$2,479	$2,363	$2,202	$11,969
Transfer Amount from Baseline for Alternative 4	*$57*	*$247*	*$187*	*$148*	*$144*	*$783*

5 DESCRIPTION OF BASELINE AND ALTERNATIVES

The Office identified four alternative patent fee schedules and assessed them against the current patent fee schedule (Baseline or status quo) and their ability to meet a set of primary strategies and goals. In discussing and comparing the four alternatives to the Baseline, one key area that warrants attention is the treatment of small and micro entity fee reductions. Section 10(b) of the AIA sets forth that the fees set or adjusted under section 10(a) "for filing, searching, examining, issuing, appealing, and maintaining patent applications and patents shall be reduced . . . by 75 percent with respect to the application of such fees to any micro entity as defined by [new 35 U.S.C.] 123." *See* 125 Stat. at 315-17. The Baseline does not include micro entity fee reductions, and fewer fees are eligible for small entity fee reductions. Each of the four alternatives applies small and micro entity discounts to the eligible fees under section 10(b). Given the scope of section 10(b), small and micro entity discounts would be available for more than 25 patent fees that do not currently qualify for a small entity discount.

The subsections below provide a detailed description of the Baseline and each alternative. Each description contains an overview of the key indicators impacting the costs and benefits of the alternative. Sections 6 and 7 present a detailed discussion of the respective costs and benefits of each alternative.

5.1 Retain Current Patent Fee Schedule (Baseline or Status Quo)

5.1.1 Description of the Baseline

The Baseline for this analysis is the current patent fee schedule that became effective on October 5, 2012. The Office estimates that the Baseline would generate approximately

$2.4 billion in patent fees during FY 2013, which is approximately $270 million more than the Office collected in FY 2012.

Under the Baseline, the Office expects to collect sufficient revenue to continue recovering the aggregate cost of steady state operations. The Baseline also would provide sufficient revenue to continue executing some Office priorities. For example, with the 1,500 examiners hired in FY 2012, the Office could continue with plans to reduce the current patent application backlog and decrease pendency. However, when considering this increase in examination capacity through hiring, the Office must look beyond current year costs and evaluate the long-term cost of compensation and benefits in the out years. The Office estimates that it would cost an additional $154 million in FY 2013 to pay for USPTO employees hired in FY 2012 (patent examiner hires being the majority of the cost). The additional $270 million collected in FY 2013 over the amount collected in FY 2012 is sufficient to cover the out year costs for hiring the 1,500 examiners in FY 2012. However, the Baseline does not provide sufficient resources to pay for an additional 1,000 examiners to be hired in FY 2013, as planned for in the budgets used in Alternatives 1 and 4. Instead, under the Baseline, the Office would be positioned only to replace patent examiner attritions after FY 2012.

Given the limited hiring planned under the Baseline, there would be only short-term improvements in patent application pendency (and the related patent application backlog). For example, the average first action pendency would decrease to only 12.6 months in FY 2016 – short of the 10 month target; and the average total pendency would decrease to 21.0 months in FY 2017 – short of the 20 month target. In fact, the Office would never

reach the 10 month first action pendency or 20 month total pendency any time during the five-year planning period. Likewise, under the Baseline, the patent application backlog would reach approximately 422,000 applications by the end of FY 2016 (and would begin to grow again in FY 2017), the lowest level achieved during the five-year planning period, but short of the optimal inventory level of approximately 350,000 patent applications.

The Baseline patent fee schedule maintains many statutory fees that were established based on policy factors rather than cost recovery. These policy factors include *fostering innovation* by providing ease of entry into the patent system through low front-end fees (e.g., filing, search, and examination) and by allowing patent holders to pay fees based on their ability to assess the value of their invention through higher back-end fees (e.g., issue and maintenance). However, the Baseline does not allow the Office to improve the fee schedule by altering relationships between fees or offering multipart or staged fees that *offer more patent prosecution options for applicants*. Finally, one of the biggest limitations of the Baseline is the limited range of fee reductions. In retaining the status quo, the Office would not expand the range of fees eligible for a small entity fee reduction (50 percent) or provide a micro entity applicant with the fee reduction (75 percent) that Congress set forth in section 10 of the Act.

5.1.2 Key Indicators for Baseline

Table 5-1 presents the key indicators used to consider the qualitative costs and benefits for the four alternatives compared in sections 6 and 7, respectively.

Table 5-1

Baseline – Retain Current Fee Schedule Key Indicators					
Indicator	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Aggregate Fee Revenue/Cost of Patent Operations (dollars in millions)	$2,430	$2,690	$2,808	$2,903	$2,887
Serialized Utility Application Filings (Total)	400,632	420,720	441,813	463,962	487,220
Average First Action Pendency (months)	18.3	16.8	14.6	12.6	12.4
Average Total Pendency (months)	30.1	26.6	25.0	22.7	21.0
Patents Granted (Total)	273,493	297,865	317,537	326,601	302,451
Maintenance Fee Renewal Rate – Stage 1	88.3%	88.8%	88.9%	88.9%	88.9%
Maintenance Fee Renewal Rate – Stage 2	77.6%	80.2%	81.7%	79.2%	80.7%
Maintenance Fee Renewal Rate – Stage 3	70.6%	73.5%	74.8%	72.4%	73.7%

- ***Aggregate Fee Revenue/Cost of Patent Operations:*** Overall, the Baseline provides sufficient aggregate revenue to pay for the current cost of patent operations, but does not achieve all of the Office's strategies and goals. For example, Baseline revenue would be adequate to continue with patent process reengineering and some patent IT improvements, but at a slower pace than planned for in the annual Budget. Baseline revenue would also allow the Office to continue with the nationwide workforce initiative by maintaining the initial satellite office in Detroit, and expanding the nationwide workforce initiative to other planned locations on a prolonged schedule. This indicator is used to consider the cost of patent operations in Section 6 for each of the alternatives and therefore determine what initiatives the Office could pursue and complete. For every alternative that meets or exceeds Baseline aggregate revenue, the Office could accomplish everything described in the Baseline.

- ***Serialized Utility Application Filings:*** Under the Baseline fee schedule, the Office anticipates year over year growth in serialized application filings.

- ***First Action Average Pendency and Total Average Pendency:*** As described above, Baseline pendency initially decreases in response to hiring the 1,500 additional examiners hired in FY 2012. However, pendency targets (10 months first action in FY 2016 and 20 months total in FY 2017) would never be achieved during the five-year planning period and would eventually increase after FY 2017 because the Office would not be able to hire and maintain 1,000 additional examiners in FY 2013 to keep up with the increasing workload. To perform better than the Baseline in achieving the pendency targets, any alternative must recover enough revenue to hire 1,000 examiners in FY 2013.

- ***Patents Granted:*** Under the Baseline, examination capacity is adequate to make some progress in decreasing patent application pendency, but as the rate of application filings increases each year, inadequate revenue does not allow the Office to further increase capacity. The result is that the decrease in pendency begins to slow (*see* discussion above), and production, as measured by patents granted, begins to decrease FY 2017.

- ***Maintenance Fee Renewal Rates (Stage 1, Stage 2, and Stage 3):*** The Baseline maintenance renewal fees increase at each stage while the maintenance fee renewal

rates decrease at each stage—an inverse relationship. Baseline renewal rates represent the Office's estimates based on current rates and historical trends.

Sections 6 and 7 use the above listed indicators to consider each alternative

5.2 Alternative 1 – Final Fee Schedule – Set and Adjust Patent Fees

5.2.1 Description of Alternative 1

Alternative 1 is the recommended fee schedule set forth in the final rule. Transitioning to the final fee schedule in FY 2013 would provide the USPTO with a 2 percent increase in fee collections over the Baseline fee collection levels (and $320 million more than the Office collected in FY 2012). Once fully transitioned to these new fee levels, the Office estimates that FY 2014 fee collections would exceed FY 2014 Baseline fee collections by 4.3 percent. The aggregate revenue would be sufficient to recover the aggregate cost of patent operations for implementing the rulemaking goals and strategies and the Office's strategic goals to improve the timeliness of patent processing (through reducing patent application inventory and pendency) and implement a sustainable funding model for operations (by establishing a three-month patent operating reserve). Alternative 1 would include new small entity discounts and introduce micro entity discounts. It likewise makes the small and micro entity discount applicable to more than 25 patent fees that do not qualify for a small entity discount under the Baseline.

Like the Baseline, Alternative 1 sets many fees either below or above cost consistent with the key policy considerations of *fostering innovation*, *facilitating effective administration of the patent system*, and *offering patent prosecution options for applicants*. Section 7.2.2.1

presents the fee schedule design as a benefit of this alternative and presents numerous examples of how this alternative is uniquely responsive to stakeholder feedback in ways the other alternatives are not. However, the cost of patent operations would be higher under this alternative than under the Baseline and Alternatives 2 and 3 (discussed later).

Table 5-2 presents major fee changes between the Baseline and Alternative 1 for common fees that have the greatest impact on patent revenue for the Office. Large and small entity dollar and percent changes are compared to current large and small entity fees. For purposes of comparison, where there are new micro entity fees, the dollar and percent changes are calculated from the current small entity fee amount (or large entity fee, where applicable). A complete list of fee changes for Alternative 1 can be found in the document titled "Table of Patent Fee Changes" available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1.

Table 5-2

Alternative 1 – Final Rule – Set and Adjust Section 10 Fees Current and Final Fees					
Description	**Current Fees**		**Final Fees and % Change**		
	Current Large Entity Fee	**Current Small Entity Fee**	**Final Large Entity Fee**	**Final Small Entity Fee**	**Final Micro Entity Fee**
Basic Filing, Search, and Exam - Utility (total)	$1,260	$630	$1,600 **27%**	$800 **27%**	$400 **-37%**
Request for Prioritized Examination	$4,800	$2,400	$4,000 **-17%**	$2,000 **-17%**	$1,000 **-58%**
Independent Claims in Excess of Three	$250	$125	$420 **68%**	$210 **68%**	$105 **-16%**
Claims in Excess of Twenty	$62	$31	$80 **29%**	$40 **29%**	$20 **-35%**
Multiple Dependent Claims	$460	$230	$780 **70%**	$390 **70%**	$195 **-15%**
Utility Application Size Fee – For each Additional 50 Sheets that Exceed 100 Sheets	$320	$160	$400 **25%**	$200 **25%**	$100 **-38%**
Extension for Response within First Month	$150	$75	$200 **33%**	$100 **33%**	$50 **-33%**
Extension for Response within Second Month	$570	$285	$600 **5%**	$300 **5%**	$150 **-47%**
Extension for Response within Third Month	$1,290	$645	$1,400 **9%**	$700 **9%**	$350 **-46%**
Extension for Response within Fourth Month	$2,010	$1,005	$2,200 **9%**	$1,100 **9%**	$550 **-45%**
Extension for Response within Fifth Month	$2,730	$1,365	$3,000 **10%**	$1,500 **10%**	$750 **-45%**
First Request for Continued Examination (RCE)	$930	$465	$1,200 **29%**	$600 **29%**	$300 **-35%**
Second and Subsequent Request for Continued Examination (NEW)	$930	$465	$1,700 **83%**	$850 **83%**	$425 **-9%**
Notice of Appeal	$630	$315	$800 **27%**	$400 **27%**	$200 **-37%**
Filing a Brief in Support of an Appeal in Application or *Ex Parte* Reexamination Proceeding	$630	$315	$0 **-100%**	$0 **-100%**	$0 **-100%**

Alternative 1 – Final Rule – Set and Adjust Section 10 Fees Current and Final Fees					
Description	**Current Fees**		**Final Fees and % Change**		
	Current Large Entity Fee	**Current Small Entity Fee**	**Final Large Entity Fee**	**Final Small Entity Fee**	**Final Micro Entity Fee**
Appeal Forwarding Fee for Appeal in Examination or *Ex Parte* Reexamination Proceeding or Filing a Brief in Support of an Appeal in *Inter Partes* Reexamination (NEW)	N/A	N/A	$2,000 **N/A**	$1,000 **N/A**	$500 **N/A**
Total Appeal Fee (Paid before Examiner's Answer)	*$1,260*	*$630*	*$800* ***-37%***	*$400* ***-37%***	*$200* ***-68%***
Total Appeal Fees (Paid after Examiner's Answer)	*$1,260*	*$630*	*$2,800* ***122%***	*$1,400* ***122%***	*$700* ***11%***
Publication Fee for Early, Voluntary, or Normal Publication	$300	N/A	$0 **-100%**	$0 **-100%**	$0 **-100%**
Utility Issue Fee	$1,770	$885	$960 **-46%**	$480 **-46%**	$240 **-73%**
Combined Total – Pre-grant Publication and Issue Fee Utility	*$2,070*	*$1,185*	*$960* ***-54%***	*$480* ***-59%***	*$240* ***-80%***
Maintenance Fee Due at 3.5 Years (1st Stage)	$1,150	$575	$1,600 **39%**	$800 **39%**	$400 **-30%**
Maintenance Fee Due at 7.5 Years (2nd Stage)	$2,900	$1,450	$3,600 **24%**	$1,800 **24%**	$900 **-38%**
Maintenance Fee Due at 11.5 Years (3rd Stage)	$4,810	$2,405	$7,400 **54%**	$3,700 **54%**	$1,850 **-23%**
Ex Parte Reexamination	$17,750	N/A	$12,000 **-32%**	$6,000 **-66%**	$3,000 **-83%**
Processing and Treating a Request for Supplemental Examination - Up to 20 Sheets	$5,140	N/A	$4,400 **-14%**	$2,200 **-57%**	$1,100 **-79%**
Ex Parte Reexamination Ordered as a Result of a Supplemental Examination Proceeding	$16,120	N/A	$12,100 **-25%**	$6,050 **-62%**	$3,025 **-81%**
Total Supplemental Examination Fees	*$21,260*	N/A	$16,500 **-22%**	$8,250 **-61%**	$4,125 **-81%**

Alternative 1 – Final Rule – Set and Adjust Section 10 Fees Current and Final Fees					
Description	**Current Fees**		**Final Fees and % Change**		
	Current Large Entity Fee	**Current Small Entity Fee**	**Final Large Entity Fee**	**Final Small Entity Fee**	**Final Micro Entity Fee**
Inter Partes Review Request – Up to 20 Claims (Per Claim Fee for Each Claim in Excess of 20 is $200) (NEW)	N/A	N/A	$9,000 **N/A**	N/A **N/A**	N/A **N/A**
Inter Partes Review Post Institution Fee – Up to 15 Claims (Per Claim Fee for Each Claim in Excess of 15 is $400) (NEW)	N/A	N/A	$14,000 **N/A**	N/A **N/A**	N/A **N/A**
Total Inter Partes Review Fees (For Current Fees, Per Claim Fee for Each Claim in Excess of 20 is $600)	*$27,200*	*N/A*	*$23,000* ***-15%***	*N/A* ***N/A***	*N/A* ***N/A***
Post-Grant Review or Covered Business Method Patent Review Request – Up to 20 Claims (NEW)	N/A	N/A	$12,000 **N/A**	N/A **N/A**	N/A **N/A**
Post-Grant Review or Covered Business Method Patent Review Post Institution Fee – Up to 15 Claims (NEW)	N/A	N/A	$18,000 **N/A**	N/A **N/A**	N/A **N/A**
Total Post-Grant Review or Covered Business Method Patent Fees (For Current Fees, Per Claim Fee for Each Claim in Excess of 20 is $800)	*$35,800*	*N/A*	*$30,000* ***-16%***	*N/A* ***N/A***	*N/A* ***N/A***
Correct Inventorship after First Action on the Merits (NEW)	N/A	N/A	$600 **N/A**	$300 **N/A**	$150 **N/A**
Derivation Petition Fee	$400	N/A	$400 **0%**	$N/A **N/A**	$N/A **N/A**
Assignments Submitted Electronically (NEW)	$40	N/A	$0 **-100%**	N/A **N/A**	N/A **N/A**
Assignments Not Submitted Electronically (NEW)	$40	N/A	$40 **0%**	N/A **N/A**	N/A **N/A**

5.2.2 Key Indicators for Alternative 1

Table 5-3 presents the key indicators used to consider Alternative 1.

Table 5-3

Alternative 1 – Final Rule – Set and Adjust Section 10 Fees Key Indicators					
Indicator	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Aggregate Fee Revenue/Cost of Patent Operations (dollars in millions)	$2,479	$2,806	$2,871	$2,928	$2,909
Serialized Utility Application Filings (Total)	395,226	409,367	423,930	445,182	467,499
First Action Average Pendency (months)	18.0	15.8	12.9	10.5	10.0
Total Average Pendency (months)	30.1	26.1	23.7	21.0	18.8
Patents Granted (Total)	279,362	313,654	335,502	339,817	308,800
Maintenance Fee Renewal Rate – Stage 1	87.9%	85.0%	84.7%	84.4%	84.4%
Maintenance Fee Renewal Rate – Stage 2	77.4%	76.7%	78.0%	75.4%	76.8%
Maintenance Fee Renewal Rate – Stage 3	70.1%	66.3%	67.2%	64.6%	65.8%

- ***Aggregate Fee Revenue/Cost of Patent Operations:*** Overall, this alternative provides sufficient aggregate revenue to pay for the cost of patent operations that would achieve all of the rulemaking goals and strategies. This indicator is used to consider the cost of patent operations in section 6.2.

- ***Serialized Utility Application Filings:*** The serialized application filings are less than those that would be expected in the Baseline, but would still increase each year. The estimated reduction in new serialized application filings is a result of higher fees. Based on the estimated price elasticity, the Office expects a slight decrease in new, serialized application filings in response to the increase in application filing fees (filing, search, and examination). The estimated decrease in filings for Alternative 1 is more than Alternative 3, but less than Alternatives 2 and 4.

Serialized application filings are used to assess the cost of lost patent value described in section 6.2.1.

- ***First Action Average Pendency and Total Average Pendency:*** Under Alternative 1, the Office would achieve the first action pendency target in FY 2016 and the total pendency target in FY 2017. Alternative 4 is the only other alternative to achieve these pendency targets. The total average pendency is used to assess the benefit of increased private patent value described in section 7.2.1 and the benefit of decreased uncertainty described in section 7.2.2.

- ***Patents Granted:*** The Office anticipates increased production and that more patents would be granted under Alternative 1 than under the Baseline, Alternative 2, Alternative 3, and equal to Alternative 4. This is consistent with the larger cost of patent operations (i.e., additional examiners) and decreased patent application pendency under Alternative 1. Granted patents are used to consider the benefit of increased private patent value described in section 7.2.1.

- ***Maintenance Fee Renewal Rates (Stage 1, Stage 2, and Stage 3):*** In Alternative 1, the maintenance fee renewal rates for all three stages are less than the renewal rates estimated for the Baseline. This estimated reduction is based on the price elasticity–the Office expects a slight decrease in maintenance fee renewals in response to the increase in maintenance fees. The estimated decrease in maintenance fee renewals for Alternative 1 is more than Alternatives 2 and 3 for all three stages. The decrease is the same as that estimated for the first and second stage maintenance fees in

Alternative 4, but less than the third stage for Alternative 4. The maintenance fee renewal rate indicator is used to evaluate the fee schedule design benefits in section 7.2.2.

5.3 Alternative 2 – Fee Cost Recovery

5.3.1 Description of Alternative 2

Alternative 2 is a fee structure that would set many of the individual large entity fees equal to the cost of each particular service, while implementing the small and micro entity fee reductions for eligible fees. In so doing, the fee schedule in Alternative 2 includes the highest combined filing, search, and examination fees and the lowest maintenance fees of any of the alternatives. Consequently, these high application fees would result in the lowest number of new serialized patent applications of any of the alternatives—a reflection of the significant impact on the patent community. Moreover, transitioning to the Alternative 2 fee schedule in FY 2013 results in approximately a 7.6 percent decrease in fee collections from the Baseline fee collection levels. Once fully transitioned to these new fee levels, the Office estimates that FY 2014 fee collections would fall below FY 2014 Baseline fee collections by 8.4 percent. Given that the estimated aggregate revenue for Alternative 2 does not approach the Baseline level of funding, this alternative is wholly insufficient to meet the Office's strategies and goals related to pendency and the backlog of patent applications in inventory as well as sustainable funding.

Setting fees at cost recovery is a common practice in the Federal Government. OMB Circular A-25: *User Charges* provides guidance stating that user charges (fees) should be sufficient to recover the full cost to the Federal Government of providing the service,

resource, or good when the Government is acting in its capacity as sovereign. However, there are several complexities in achieving individual fee cost recovery for the patent fee schedule. The most significant is the AIA requirement to provide a 50 percent discount on fees to small entities and a 75 percent discount on fees to micro entities. The Office looked at several options for designing this alternative. For example, the Office considered increasing the fee paid by large entities to recover the lost revenue associated with the 50 and 75 percent discounts. However, this would be unduly punitive to large entities. Instead, the Office decided to adjust the large entity fee so that it reflects the full cost of the service provided, and then recover lost revenue from small and micro entity discounts through other fees (such as retaining fees for which cost data is not used to inform fee setting). But, because most fees are set at individual fee cost recovery, there are not many options available to provide subsidies that recover lost revenue. Except for rounding these fee amounts so that micro entity fees would be set at a whole dollar amount when applying the fee reduction, the Office left the fees that are not typically set using cost data as an indicator at current rates. Finally, the Office would not receive revenue equal to the full cost of examining the applications currently comprising the backlog when those applications were filed (application fees are set below the cost of the Office). (*See* section 1.3 describing how the Office operated prior to fee setting authority under the AIA).

Given these complexities, the Office requires more revenue to sustain operations than a simple cost recovery alternative would generate. Therefore, the Office determined the level of maintenance fees that would ensure the Office is able to pay minimum expenses (which are at a level below the Baseline). As a result, this alternative includes maintenance fees set at approximately half of the amount of current maintenance fees. Additional information

about the fee cost calculation methodology, including the cost components related to respective fees, is available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1 in the document titled "USPTO Section 10 Fee Setting – Activity-Based Information and Costing Methodology." A summary of the unit cost associated with the major fees is presented in Table 5-4. This unit cost information was used to inform the large entity fee amounts used in this alternative.

Table 5-4

Unit Cost Information	
Fee Description	**FY 2009/FY 2010/FY 2011**
Basic Filing, Search, and Exam - Utility (total)	$3,665/$3,906/$3,569
Request for Prioritized Examination*	$4,000
Request for Continued Examination (RCE)	$1,881/$1,696/$2,070
Notice of Appeal	$5,008/$4,960/$4,799
Filing a Brief in Support of an Appeal	
Publication Fee for Early, Voluntary, or Normal Publication	$243/$158/$181
Utility Issue Fee	$224/$231/$257
Ex Parte Reexamination**	$17,162/$16,647/$19,626 $17,750 (Prospective)
Processing and Treating a Request for Supplemental Examination (NEW)***	$5,180
Ex Parte Reexamination Ordered as a Result of a Supplemental Examination Proceeding (NEW)***	$16,120

* The Cost Calculation is available in the final rule. *See* Changes To Implement the Prioritized Examination Track (Track I) of the Enhanced Examination Timing Control Procedures, 76 FR 6369 (Feb. 4, 2011).

** The Office has both historical and prospective cost data for this fee. *See* Cost Calculation, 77 FR 48828 (Aug. 14, 2012), available at http://www.uspto.gov/aia_implementation/cost_calc_supplemental_exam.pdf.

*** This fee is set under 35 U.S.C. Sec. 41(d)(2) in the August 2012 Final Rules. Given that the Office does not yet have historical cost data, the cost presented is the Office's prospective or anticipated costs. *See* Cost Calculation, 77 FR 48828 (Aug. 14, 2012), available at http://www.uspto.gov/aia_implementation/cost_calc_supplemental_exam.pdf.

Unit Cost Information	
Fee Description	**FY 2009/FY 2010/FY 2011**
Inter Partes Review Petition****	$27,200
Post-Grant Review****	$35,800
Maintenance Fee Due at 3.5 Years (1st Stage)	$2/$1/N/A
Maintenance Fee Due at 7.5 Years (2nd Stage)	$2/$1/N/A
Maintenance Fee Due at 11.5 Years (3rd Stage)	$2/$1/N/A

Although this alternative provides sufficient aggregate revenue to pay for the minimum mandatory expenses, the Office projects a significant revenue shortfall and adverse impact on meeting the goals in the Strategic Plan. Specifically, Alternative 2 would not allow the Office to increase examination capacity through hiring; achieve the operating reserve target balance by FY 2018 (in fact, this alternative depletes the existing reserve); or make scheduled progress on key initiatives like IT improvements, opening satellite offices, and executing quality improvements. Alternative 2 also reverses the policy of *fostering innovation* via lower front-end fees. Under this alternative, the increase in front-end fees is the greatest of any of the alternatives considered.

Table 5-5 presents the major fee changes between the Baseline and Alternative 2 for common fees. Final large and small entity dollar and percent changes are compared to current large and small entity fees. For purposes of comparison, where there are micro entity fees, the dollar and percent changes are calculated from the current small entity fee amount (or large entity fee, where applicable). A complete list of fee changes for

****This fee is set under 35 U.S.C. Sec. 41(d)(2) in the August 2012 Final Rules. Given that the Office does not yet have historical cost data, the cost presented is the Office's prospective or anticipated costs. *See* Cost Calculation, 77 FR 48680 (Aug. 14, 2012), available at http://www.uspto.gov/aia_implementation/rin-0651-ac70.pdf.

Alternative 2 is available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1 in the document titled, "Alternative 2 Aggregate Revenue Table."

Table 5-5

Alternative 2 - Fee Cost Recovery Current and Final Rule Fees					
Description	**Current Fees**		**Final Fees and % Change**		
	Current Large Entity Fee	**Current Small Entity Fee**	**Final Large Entity Fee**	**Final Small Entity Fee**	**Final Micro Entity Fee**
Basic Filing, Search, and Exam - Utility (total)	$1,260	$630	$3,920 **211%**	$1,960 **211%**	$980 **56%**
Request for Prioritized Examination	$4,800	$2,400	$4,000 **-17%**	$2,000 **-17%**	$1,000 **-58%**
Independent Claims in Excess of Three	$250	$125	$260 **4%**	$130 **4%**	$65 **-48%**
Claims in Excess of Twenty	$62	$31	$64 **3%**	$32 **3%**	$16 **-48%**
Multiple Dependent Claims	$460	$230	$460 **0%**	$230 **0%**	$115 **-50%**
Utility Application Size Fee – For each Additional 50 Sheets that Exceed 100 Sheets	$320	$160	$320 **0%**	$160 **0%**	$80 **-50%**
Extension for Response within First Month	$150	$75	$160 **7%**	$80 **7%**	$40 **-47%**
Extension for Response within Second Month	$570	$285	$580 **2%**	$290 **2%**	$145 **-49%**
Extension for Response within Third Month	$1,290	$645	$1,320 **2%**	$660 **2%**	$330 **-49%**
Extension for Response within Fourth Month	$2,010	$1,005	$2,060 **2%**	$1,030 **2%**	$515 **-49%**
Extension for Response within Fifth Month	$2,730	$1,365	$2,800 **3%**	$1,400 **3%**	$700 **-49%**
Request for Continued Examination (RCE)	$930	$465	$1,700 **83%**	$850 **83%**	$425 **-9%**
Notice of Appeal	$630	$315	$2,480 **294%**	$1,240 **294%**	$620 **97%**
Filing a Brief in Support of an Appeal	$630	$315	$2,480 **294%**	$1,240 **294%**	$620 **97%**

Alternative 2 - Fee Cost Recovery Current and Final Rule Fees					
Description	**Current Fees**		**Final Fees and % Change**		
	Current Large Entity Fee	**Current Small Entity Fee**	**Final Large Entity Fee**	**Final Small Entity Fee**	**Final Micro Entity Fee**
Publication Fee for Early, Voluntary, or Normal Publication	$300	N/A	$160 **-47%**	N/A **N/A**	N/A **N/A**
Utility Issue	$1,770	$885	$240 **-86%**	$120 **-86%**	$60 **-93%**
Maintenance Fee Due at 3.5 Years (1st Stage)	$1,150	$575	$600 **-48%**	$300 **-48%**	$150 **-74%**
Maintenance Fee Due at 7.5 Years (2nd Stage)	$2,900	$1,450	$1,200 **-59%**	$600 **-59%**	$300 **-79%**
Maintenance Fee Due at 11.5 Years (3rd Stage)	$4,810	$2,405	$2,400 **-50%**	$1,200 **-50%**	$600 **-75%**
Ex Parte Reexamination	$17,750	N/A	$17,760 **0%**	$8,880 **-50%**	$4,440 **-75%**
Processing and Treating a Request for Supplemental Examination	$5,140	N/A	$5,140 **0%**	$2,570 **-50%**	$1,285 **-75%**
Ex Parte Reexamination Ordered as a Result of a Supplemental Examination Proceeding	$16,120	N/A	$16,120 **0%**	$8,060 **-50%**	$4,030 **-75%**
Inter Partes Review Petition	$27,200	N/A	$27,200 **0%**	N/A **N/A**	N/A **N/A**
Post-Grant Review	$35,800	N/A	$35,800 **0%**	N/A **N/A**	N/A **N/A**
Petition for a Derivation Proceeding	$400	N/A	$400 **0%**	N/A **N/A**	N/A **N/A**

5.3.2 Key Indicators for Alternative 2

Table 5-6 presents the key indicators used to consider Alternative 2.

Table 5-6

Alternative 2: Fee Cost Recovery Key Indicators					
Indicator	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Aggregate Fee Revenue/Cost of Patent Operations (dollars in millions)	$2,246	$2,463	$2,434	$2,527	$2,589
Serialized Utility Application Filings (Total)	358,343	331,901	301,906	317,041	332,933
First Action Average Pendency (months)	19.8	20.2	20.4	21.2	22.8
Total Average Pendency (months)	30.1	28.9	29.4	29.8	31.2
Patents Granted (Total)	245,713	251,797	259,267	256,246	247,603
Maintenance Fee Renewal Rate – Stage 1	88.8%	94.8%	95.3%	95.7%	95.7%
Maintenance Fee Renewal Rate – Stage 2	78.6%	91.5%	93.7%	91.3%	92.8%
Maintenance Fee Renewal Rate – Stage 3	71.2%	82.3%	84.2%	81.8%	83.1%

- ***Aggregate Fee Revenue/Cost of Patent Operations:*** Overall, Alternative 2 does not provide sufficient aggregate revenue to pay for the cost of patent operations to achieve the rulemaking goals and strategies. In fact, Alternative 2 recovers the least amount of revenue to pursue the Office's strategies and goals, resulting in inadequate staffing and increasing pendency. This indicator is used to assess the cost of patent operations in section 6.3.1.

- ***Serialized Utility Application Filings:*** The serialized application filings are significantly less than those expected under the Baseline. Based on the estimated price elasticity, the Office expects a significant decrease in new, serialized application filings in response to the increase in application filing fees (filing, search, and examination). The estimated decrease in filings for Alternative 2 is greater than

the estimated decrease for all other alternatives considered. Serialized application filings are used to consider the cost of lost patent value described in section 6.3.1.

- ***First Action Average Pendency and Total Average Pendency:*** The Office would not achieve its target pendency levels under Alternative 2. Both first action and total average pendency increase by the end of the five-year period primarily because the fee schedule would not recover enough revenue to permit the Office to hire the examiners needed to respond to incoming workload and the backlog. First action pendency gradually increases each year and, while there is a small initial decrease in total pendency in FY 2014 (realizing the benefits of the 1,500 patent examiners hired during FY 2012), there is a gradual increase thereafter in FY 2015 through FY 2017. The total average pendency is used to consider the cost of decreased private patent value described in section 6.3.1 and the cost of increased uncertainty described in section 6.3.2.

- ***Patents Granted:*** The Office anticipates that fewer patents would be granted under Alternative 2 than under the Baseline and the other alternatives. This is consistent with the longer patent application pendency indicators under Alternative 2. Granted patents are used to assess the cost of decreased private patent value described in section 6.3.1.

- ***Maintenance Fee Renewal Rates (Stage 1, Stage 2, and Stage 3):*** In Alternative 2, the maintenance fee renewal rates for all three stages are higher than the renewal rates estimated for the Baseline. This estimated increase is based on the price

elasticity – the Office expects a significant increase in maintenance fee renewals in response to the decrease in maintenance fees. The maintenance fee renewal rate indicator is used to evaluate the fee schedule design costs in section 6.3.2. However, the smaller number of patents granted (*see* previous indicator) reduces the number of patents available for future maintenance fee payments.

5.4 Alternative 3 – Across-the-Board Adjustment

5.4.1 Description of Alternative 3

In the past, the Office used its statutory authority to adjust statutory fees annually according to changes in the CPI, which is a commonly used measure of inflation. Building on this prior approach, Alternative 3 uses the Office's section 10 fee setting authority to apply the equivalent of a multiple year inflationary adjustment of 6.7 percent to the Baseline.

Transitioning to the Alternative 3 fee schedule in FY 2013 would provide the USPTO with a 0.8 percent decrease in fee collections from the Baseline fee collection levels. Once fully transitioned to the new fee levels, however, the Office estimates that FY 2014 fee collections under Alternative 3 would exceed FY 2014 Baseline fee collections by approximately 3.3 percent. The aggregate revenue is sufficient to recover the aggregate cost of baseline patent operations, but would not go far enough to meet both of the Office's strategic goals to improve the timeliness of patent processing (through reducing patent applications in backlog and decreasing pendency) and implement a sustainable funding model for operations (by establishing a three-month patent operating reserve). It is important for the Office to balance accomplishing both goals together so that once it achieves the pendency goals, it has sufficient resources to maintain them. Alternative 3

builds the three-month patent operating reserve during the five-year planning period, but does not generate sufficient aggregate revenue to also achieve the patent pendency goals by FY 2016 and FY 2017. In fact, the revenue generated under Alternative 3 during FY 2013 is not only insufficient to hire 1,000 patent examiners (like Alternatives 1 and 4), but also uses $55 million of the operating reserve to pay for the 1,500 patent examiners hired in FY 2012 and maintain baseline operations.

The Office developed the 6.7 percent inflationary factor using estimates from CBO (as previously discussed) for FY 2013 (estimated implementation date of a new fee schedule) to FY 2016 (estimated time frame that the Office could consider resetting fees once the operating reserve achieves the target level). As estimated by the CBO, inflationary rates by fiscal year are: 1.4 percent in FY 2013, 1.5 percent in FY 2014, 1.6 percent in FY 2015, and 2.0 percent in FY 2016. Each percentage rate for a given year also applies to the subsequent years (e.g., a 1.4 percent increase for FY 2013 is applied to FY 2014 and beyond). The Office multiplied these rates together to account for the compounding effect occurring from year-to-year and then rounded, resulting in an increase totaling 6.7 percent. The Office then added the 6.7 percent adjustment to all fee amounts in effect prior to October 5, 2012.

Alternative 3 retains the same fee relationships and subsidization policies as the Baseline. For example, it maintains the status quo ratio of front-end and back-end fees, given that all fees would be adjusted by the same escalation factor, thereby *fostering innovation* and allowing new applicants to gain access to the patent system through fees set below cost while patent holders pay maintenance fees above cost to subsidize the reduced front-end fees. Alternative 3 nevertheless fails to implement policy considerations and effect benefits

beyond what exists in the Baseline via the fee schedule design (e.g., no multipart or staged fees to *offer patent prosecution options for applicants*).

Table 5-7 presents the major fee changes between the Baseline and Alternative 3 for common fees. Final large and small entity dollar and percent changes are compared to the current large and small entity fees. For purposes of comparison, where there are micro entity fees, the dollar and percent changes are calculated from the current small entity fee amount (or large entity fee, where applicable). A complete list of fee changes for Alternative 3 is available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1 in the document titled, "Alternative 3 Aggregate Revenue Table."

Table 5-7

Alternative 3 - Across-the-Board Adjustment Current and Final Rule Fees					
Description	**Current Fees**		**Final Fees and % Change**		
	Current Large Entity Fee	**Current Small Entity Fee**	**Final Large Entity Fee**	**Final Small Entity Fee**	**Final Micro Entity Fee**
Basic Filing, Search, and Exam - Utility (total)	$1,260	$630	$1,340 **6%**	$670 **6%**	$335 **-47%**
Request for Prioritized Exam	$4,800	$2,400	$5,120 **7%**	$2,560 **7%**	$1,280 **-47%**
Independent Claims in Excess of Three	$250	$125	$260 **4%**	$130 **4%**	$65 **-48%**
Claims in Excess of Twenty	$62	$31	$60 **-3%**	$30 **-3%**	$15 **-52%**
Multiple Dependent Claims	$460	$230	$500 **9%**	$250 **9%**	$125 **-46%**
Utility Application Size Fee – For each Additional 50 Sheets that Exceed 100 Sheets	$320	$160	$340 **6%**	$170 **6%**	$85 **-47%**
Extension for Response within First Month	$150	$75	$160 **7%**	$80 **7%**	$40 **-47%**
Extension for Response within Second Month	$570	$285	$600 **5%**	$300 **5%**	$150 **-47%**
Extension for Response within Third Month	$1,290	$645	$1,400 **9%**	$700 **9%**	$350 **-46%**
Extension for Response within Fourth Month	$2,010	$1,005	$2,200 **9%**	$1,100 **9%**	$550 **-45%**
Extension for Response within Fifth Month	$2,730	$1,365	$3,000 **10%**	$1,500 **10%**	$750 **-45%**
Request for Continued Examination (RCE)	$930	$465	$1,000 **8%**	$500 **8%**	$250 **-46%**
Notice of Appeal	$630	$315	$680 **8%**	$340 **8%**	$170 **-46%**
Filing a Brief in Support of an Appeal	$630	$315	$680 **8%**	$340 **8%**	$170 **-46%**
Publication Fee for Early, Voluntary, or Normal Publication	$300	N/A	$320 **7%**	N/A **N/A**	N/A **N/A**
Utility Issue	$1,770	$885	$1,880 **6%**	$940 **6%**	$470 **-47%**
Maintenance Fee Due at 3.5 Years (1st Stage)	$1,150	$575	$1,220 **6%**	$610 **6%**	$305 **-47%**

Alternative 3 - Across-the-Board Adjustment Current and Final Rule Fees					
Description	**Current Fees**		**Final Fees and % Change**		
	Current Large Entity Fee	**Current Small Entity Fee**	**Final Large Entity Fee**	**Final Small Entity Fee**	**Final Micro Entity Fee**
Maintenance Fee Due at 7.5 Years (2nd Stage)	$2,900	$1,450	$3,100 **7%**	$1,550 **7%**	$775 **-47%**
Maintenance Fee Due at 11.5 Years (3rd Stage)	$4,810	$2,405	$5,140 **7%**	$2,570 **7%**	$1,285 **-47%**
Ex Parte Reexamination	$17,750	N/A	$18,940 **7%**	$9,470 **-47%**	$4,735 **-73%**
Processing and Treating a Request for Supplemental Examination	$5,140	N/A	$5,480 **7%**	$2,740 **-47%**	$1,370 **-73%**
Ex Parte Reexamination Ordered as a Result of a Supplemental Examination Proceeding	$16,120	N/A	$17,200 **7%**	$8,600 **-47%**	$4,300 **-73%**
Inter Partes Review Petition	$27,200	N/A	$29,020 **7%**	N/A **N/A**	N/A **N/A**
Post-Grant Review	$35,800	N/A	$38,200 **7%**	N/A **N/A**	N/A **N/A**
Petition for a Derivation Proceeding	$400	N/A	$420 **5%**	N/A **N/A**	N/A **N/A**

5.4.2 Key Indicators for Alternative 3

Table 5-8 presents the key indicators used to consider Alternative 3.

Table 5-8

Alternative 3: Across-the-Board Adjustment Key Indicators					
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Aggregate Fee Revenue/Cost of Patent Operations (dollars in millions)	$2,411	$2,779	$2,897	$2,994	$2,974
Serialized Utility Application Filings (Total)	399,360	418,049	437,605	459,543	482,579
First Action Average Pendency (months)	18.3	16.8	14.6	12.6	12.4
Total Average Pendency (months)	30.1	26.6	25.0	22.7	21.0
Patents Granted (Total)	273,493	297,865	317,537	326,601	302,451
Maintenance Fee Renewal Rate – Stage 1	88.2%	88.5%	88.5%	88.5%	88.5%
Maintenance Fee Renewal Rate – Stage 2	77.6%	79.4%	80.9%	78.4%	79.8%
Maintenance Fee Renewal Rate – Stage 3	70.5%	72.7%	74.1%	71.6%	72.9%

- ***Aggregate Fee Revenue/Cost of Patent Operations:*** Overall, Alternative 3 provides sufficient aggregate revenue to meet steady state operations and keep up with inflation over the next several years. This alternative also provides sufficient aggregate revenue to build a three-month operating reserve. However, the Office would not achieve the pendency and application inventory targets during the five-year period ending FY 2017. This indicator is used to consider the cost of patent operations in section 6.4.1.

- ***Serialized Utility Application Filings:*** Under Alternative 3, the serialized application filings are slightly less than what would be expected under the Baseline, but would still increase each year. The estimated reduction in new serialized application filings is a result of fees higher than the Baseline. Based on the estimated price elasticity, the Office expects a slight decrease in new, serialized application filings in response to the increase in application filing fees (filing, search, and examination). The estimated decrease in filings for Alternative 3 is less than

that for Alternatives 1, 2, and 4. Serialized application filings are used to consider the cost of lost patent value described in section 6.4.2.

- ***First Action Average Pendency and Total Average Pendency:*** The gradual decrease in first action average pendency and total average pendency reflects the Office's ability to leverage the additional examination capacity from production overtime and the 1,500 patent examiners hired in FY 2012 to manage steady state operations. However, under Alternative 3, the Office would not have sufficient revenue to hire additional patent examiners during FY 2013 and would never meet its pendency targets during the five-year planning period. The total average pendency is used to consider the benefit of increased private patent value; however, because Alternative 3 would achieve the same pendency as the Baseline, there are no benefits related to private patent value discussed in section 7.4.1.

- ***Patents Granted:*** The Office anticipates that the same number of patents would be granted under Alternative 3 as under the Baseline. Granted patents are used as an input to assess the benefit of increased private patent value; however, as mentioned above, Alternative 3 would not achieve a benefit related to private patent value because the patent application pendency would not change compared to the Baseline. This indicator is used to consider the cost of lost patent value described in section 6.4.2.

- ***Maintenance Fee Renewal Rates (Stage 1, Stage 2, and Stage 3):*** In Alternative 3, the maintenance fee renewal rates for all three stages are, on average, less than the

renewal rates estimated for the Baseline. This estimated reduction is based on the price elasticity – the Office expects a slight decrease in maintenance fee renewals in response to the increase in maintenance fees. The estimated decrease in maintenance fee renewals for Alternative 3 is less than the decrease for Alternative 1 and Alternative 4 and greater than the change in maintenance fee renewal rates for Alternative 2. The maintenance fee renewal rate indicator is used to evaluate the fee schedule design benefits in section 7.4.2.

5.5 Alternative 4 – Initial Proposal to PPAC

5.5.1 Description of Alternative 4

Alternative 4 is the Office's initial proposed fee schedule that was delivered to the PPAC on February 7, 2012. Transitioning to the Alternative 4 fee schedule in FY 2013 would provide the USPTO with a 2.5 percent increase in fee collections over the Baseline fee collection levels. Once fully transitioned to these new fee levels, the Office estimates that FY 2014 fee collections would exceed FY 2014 Baseline fee collections by 10.5 percent. The aggregate revenue would be sufficient to recover the aggregate cost of patent operations for implementing the rulemaking goals and strategies and both of the Office's strategic goals to improve the timeliness of patent processing (through reducing patent application in inventory and pendency), and to implement a sustainable funding model for operations. In fact, this alternative offers all the advantages of the final fee schedule (Alternative 1), including meeting the patent application pendency and application inventory targets in FY 2016 (first action pendency) and FY 2017 (average total pendency and application inventory). However, Alternative 4 is unique, because the operating reserve grows more

rapidly and achieves its target in FY 2016 instead of after the five-year planning period (in FY 2018) like under Alternative 1.

Similar to Alternative 1 (the final fee schedule), this alternative would improve on the policy factors in the Baseline fee schedule (e.g., back-end fees subsidizing front-end fees) and includes staging certain fees that *offer patent prosecution options for applicants*. But Alternative 4 would not permit as many fees to be staged as Alternative 1, nor would it allow for multipart fees like Alternative 1. Further, many patent stakeholders viewed the rapid pace for building the operating reserve under Alternative 4 (and the required higher fees to support this effort) as too aggressive. The Office's response to this concern was to create the final fee schedule (Alternative 1), where the operating reserve is built at a slower rate.

Table 5-9 presents the major fee changes between the Baseline and Alternative 4 for common fees. Final large and small entity dollar and percent changes are compared to the current large and small entity fees. For purposes of comparison, where there are micro entity fees, the dollar and percent changes are calculated from the current small entity fee amount (or large entity fee, where applicable). A complete list of fee changes for Alternative 4 is available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1 in the document titled, "Alternative 4 Aggregate Revenue Table."

Table 5-9

Alternative 4 - Initial Proposal to PPAC Current and Final Rule Fees					
Description	**Current Fees**		**Final Fees and % Change**		
	Current Large Entity Fee	**Current Small Entity Fee**	**Final Large Entity Fee**	**Final Small Entity Fee**	**Final Micro Entity Fee**
Basic Filing, Search, and Exam - Utility (total)	$1,260	$630	$1,840 **46%**	$920 **46%**	$460 **-27%**
Request for Prioritized Exam	$4,800	$2,400	$4,000 **-17%**	$2,000 **-17%**	$1,000 **-58%**
Independent Claims in Excess of Three	$250	$125	$460 **84%**	$230 **84%**	$115 **-8%**
Claims in Excess of Twenty	$62	$31	$100 **61%**	$50 **61%**	$25 **-19%**
Multiple Dependent Claims	$460	$230	$860 **87%**	$430 **87%**	$215 **-7%**
Utility Application Size Fee – For each Additional 50 Sheets that Exceed 100 Sheets	$320	$160	$400 **25%**	$200 **25%**	$100 **-38%**
Extension for Response within First Month	$150	$75	$200 **33%**	$100 **33%**	$50 **-33%**
Extension for Response within Second Month	$570	$285	$600 **5%**	$300 **5%**	$150 **-47%**
Extension for Response within Third Month	$1,290	$645	$1,400 **9%**	$700 **9%**	$350 **-46%**
Extension for Response within Fourth Month	$2,010	$1,005	$2,200 **9%**	$1,100 **9%**	$550 **-45%**
Extension for Response within Fifth Month	$2,730	$1,365	$3,000 **10%**	$1,500 **10%**	$750 **-45%**
Request for Continued Examination (RCE)	$930	$465	$1,700 **83%**	$850 **83%**	$425 **-9%**
Notice of Appeal	$630	$315	$1,500 **138%**	$750 **138%**	$375 **19%**
Filing a Brief in Support of an Appeal in Application or *Ex parte* Reexamination Proceeding	$630	$315	$0 **-100%**	$0 **-100%**	$0 **-100%**
Appeal Forwarding Fee (NEW)	N/A	N/A	$2,500 **N/A**	$1,250 **N/A**	$625 **N/A**
Total Appeal Fees (Paid before Examiner's Answer)	*$1,260*	*$630*	*$1,500* ***19%***	*$750* ***19%***	*$375* ***-40%***
Total Appeal Fees (Paid after Examiner's Answer)	*$1,260*	*$630*	*$4,000* ***217%***	*$2,000* ***217%***	*$1,000* ***59%***

Alternative 4 - Initial Proposal to PPAC Current and Final Rule Fees					
Description	**Current Fees**		**Final Fees and % Change**		
	Current Large Entity Fee	**Current Small Entity Fee**	**Final Large Entity Fee**	**Final Small Entity Fee**	**Final Micro Entity Fee**
Publication Fee for Early, Voluntary, or Normal Publication	$300	N/A	$0 **-100%**	$0 **-100%**	$0 **-100%**
Utility Issue Fee	$1,770	$885	$960 **-46%**	$480 **-46%**	$240 **-73%**
Combined Total – Pre-grant Publication and Issue Fee - Utility	*$2,070*	*$1,185*	$960 **-54%**	$480 **-59%**	$240 **-80%**
Maintenance Fee Due at 3.5 Years (1st Stage)	$1,150	$575	$1,600 **39%**	$800 **39%**	$400 **-30%**
Maintenance Fee Due at 7.5 Years (2nd Stage)	$2,900	$1,450	$3,600 **24%**	$1,800 **24%**	$900 **-38%**
Maintenance Fee Due at 11.5 Years (3rd Stage)	$4,810	$2,405	$7,600 **58%**	$3,800 **58%**	$1,900 **-21%**
Ex Parte Reexamination	$17,750	N/A	$17,760 **0%**	$8,880 **-50%**	$4,440 **-75%**
Processing and Treating a Request for Supplemental Examination	$5,140	N/A	$7,000 **36%**	$3,500 **-32%**	$1,750 **-66%**
Ex Parte Reexamination Ordered as a Result of a Supplemental Examination Proceeding	$16,120	N/A	$20,000 **24%**	$10,000 **-38%**	$5,000 **-69%**
Inter Partes Review Petition	$27,200	N/A	$27,200 **0%**	N/A **N/A**	N/A **N/A**
Post-Grant Review	$35,800	N/A	$35,800 **0%**	N/A **N/A**	N/A **N/A**
Correct Inventorship after First Action on the Merits (NEW)	N/A	N/A	$1,700 **N/A**	$850 **N/A**	$425 **N/A**
File and Oath/Declaration Up to the Notice of Allowance (NEW)	N/A	N/A	$3,000 **N/A**	$1,500 **N/A**	$750 **N/A**
Petition for a Derivation Proceeding	$400	N/A	$400 **0%**	N/A **N/A**	N/A **N/A**

5.5.2 Key Indicators for Alternative 4

Table 5-10 presents the key indicators used to consider Alternative 4.

Table 5-10

Alternative 4: Initial Proposal to PPAC Key Indicators					
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Aggregate Fee Revenue/Cost of Patent Operations (dollars in millions)	$2,491	$2,973	$3,037	$3,098	$3,088
Serialized Utility Application Filings (Total)	391,411	401,353	411,307	431,926	453,578
First Action Average Pendency (months)	18.0	15.8	12.9	10.5	10.0
Total Average Pendency (months)	30.1	26.1	23.7	21.0	18.8
Patents Granted (Total)	279,362	313,654	335,502	339,817	308,800
Maintenance Fee Renewal Rate – Stage 1	87.9%	85.0%	84.7%	84.4%	84.4%
Maintenance Fee Renewal Rate – Stage 2	77.4%	76.7%	78.0%	75.4%	76.8%
Maintenance Fee Renewal Rate – Stage 3	70.0%	65.8%	66.6%	64.0%	65.2%

- ***Aggregate Fee Revenue/Cost of Patent Operations:*** Overall, Alternative 4 provides sufficient aggregate revenue to pay for the cost of patent operations to achieve the rulemaking goals and strategies. This indicator is used to consider the cost of patent operations in section 6.5.1.

- ***Serialized Utility Application Filings:*** The serialized application filings under Alternative 4 are less than what would be expected under the Baseline, but would still increase each year. The reduction is based on the estimated price elasticity. The Office expects a slight decrease in new, serialized application filings in response to the increase in application filing fees (filing, search, and examination). The estimated decrease in filings for Alternative 4 is greater than it is for Alternatives 1 and 3, but less than that of Alternative 2. Serialized application filings are used to consider the cost of lost patent value described in section 6.5.1.

- ***First Action Average Pendency and Total Average Pendency:*** Both first action and total average pendency would decrease over the five-year period in Alternative 4. Thus, the Office would achieve its first action pendency target in FY 2016 and the total pendency target in FY 2017. Alternative 1 is the only other alternative to achieve these pendency targets. The total average pendency is used to assess the benefit of increased private patent value described in section 7.5.1 and the benefit of decreased uncertainty described in section 7.5.2.

- ***Patents Granted:*** The Office anticipates increased production and that more patents would be granted under Alternative 4 than under the Baseline, Alternative 2, Alternative 3, and equal to Alternative 1. This is consistent with the larger cost of patent operations (i.e., additional examiners) and reduced patent application pendency indicators under Alternative 4. Granted patents are used to consider the benefit of increased private patent value described in section 7.5.1.

- ***Maintenance Fee Renewal Rates (Stage 1, Stage 2, and Stage 3):*** In Alternative 4, the maintenance fee renewal rates for all three stages are less than the renewal rates estimated for the Baseline. The estimated reduction is based on the price elasticity – the Office expects a slight decrease in the maintenance fee renewal rates in response to the increase in maintenance fees. The estimated decrease in maintenance fee renewals for Alternative 4 generally mirrors the rates for Alternative 1, but third stage maintenance fee renewal rate for Alternative 4 is slightly lower than for Alternative 1. This is due to the larger price increase in the third stage fee for

Alternative 4. The maintenance fee renewal rate indicator is used to evaluate the fee schedule design benefits in section 7.5.2.

6 QUALITATIVE COSTS

6.1 Description of Costs

As discussed in section 2.3, the patent system's key indicators can represent either a qualitative cost or benefit, depending on the direction of the change. For example, if an alternative reduces average pendency, the decreased pendency is presented as a benefit for that alternative. If an alternative increases pendency, however, it is presented as a cost. Where the change represents a cost, the item is presented in this section and is described accordingly.

This section describes the major qualitative costs associated with the alternatives considered in this analysis. Table 6-1 presents an overview of the specific costs associated with each alternative, since not all costs apply to each alternative. For example, the Alternative 2 fee schedule would result in a decrease in private patent value (due to an increase in pendency) but does not increase the cost of patent operations (due to less expected aggregate revenue). If a cost applies to a certain alternative, it is denoted with a checkmark.

Table 6-1

Cost Description	Alt.1 – Final Rule – Set and Adjust Section 10 Fees	Alt. 2 – Fee Cost Recovery	Alt. 3 – Across-the-Board Adjustment	Alt. 4 – Initial Proposal to PPAC
Increase in Cost of Patent Operations	✓		✓	✓
Decrease in Private Patent Value from an Increase in Pendency		✓		
Lost Patent Value from a Decrease in Applications Filed	✓	✓	✓	✓
Overall Fee Schedule Design Costs		✓		
Increase in Uncertainty from an Increase in Pendency		✓		

6.2 Costs of Alternative 1 – Final Fee Schedule – Set and Adjust Patent Fees

For Alternative 1, the Office identified two costs: (i) increase in the cost of the Office's patent operations; and (ii) lost patent value from a decrease in applications filed.

6.2.1 Alternative 1: Increase in the Office's Cost of Patent Operations

Under this alternative, the Office's cost of patent operations compared to the Baseline is considered to be slightly higher over five years (*see* Table 4-3, Table 4-4, and Table 4-5).

The primary driver for the increase in cost of patent operations under Alternative 1 is the increased examination capacity required to achieve pendency goals and the cost of building a three-month operating reserve by FY 2018 to provide sustainable funding for the Office. Specifically, the Office hired 1,500 patent examiners in 2012 and plans to increase examination capacity by hiring an additional 1,000 patent examiners in FY 2013, which would enable the Office to meet the target first action average pendency and total average pendency goals in FY 2016 and FY 2017, respectively. Other contributing costs include: quality initiatives, increased staffing levels at the Patent Trial and Appeal Board (PTAB) to allow the PTAB to address the backlog of *ex parte* appeals that has developed as a result of increased production from the examining corps, the PTAB's new administrative trial proceedings, IT improvements, and the nationwide workforce initiative to establish three additional satellite offices around the country.

6.2.2 Alternative 1: Lost Patent Value from a Decrease in New Patent Applications Filed

Domestic: The estimated number of new patent applications filed under Alternative 1 was adjusted for price elasticity since higher filing, search, and examination fees are estimated to result in slightly fewer applications being filed compared to the Baseline. In other words, there would continue to be increases in the number of applications filed, but the rate of increase would be lower compared to the Baseline in the first three years because of higher

filing, search, and examination fees. Table 6-2 shows the estimated number of applications that would be filed for the Baseline and Alternative 1 and the reduction in the number of applications filed due to price elasticity.

The Office estimates that the number of new, serialized patent applications filed under Alternative 1 would decrease by a total of 35,620 (3.2 percent) over the five-year period compared to the Baseline. The Office estimates that this decrease in application filings equates to a minimal loss in patent value.

Table 6-2

Alternative 1 – Final Fee Schedule – Set and Adjust Patent Fees Lost Patent Value from a Decrease in Applications Filed (Domestic)						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Serialized (New) Application Filings						
Baseline - Application Filings (number of)	195,108	204,891	215,163	225,949	237,276	**1,078,387**
Alt. 1 - Application Filings (number of)	192,475	199,362	206,454	216,804	227,672	**1,042,767**
Alt. 1 - Application Filings (number of - change from Baseline)	(2,633)	(5,529)	(8,709)	(9,145)	(9,604)	**(35,620)**
Granted Serialized Applications						
Alt. 1 - Granted Applications (50% of application filings- change from Baseline)	(1,316)	(2,764)	(4,354)	(4,573)	(4,802)	(17,809)
Alt. 1 - Granted Applications (percent change from Baseline)	-1.3%	-2.7%	-4.0%	-4.0%	-4.0%	**-3.2%**

Foreign: The Office estimates that a decrease in foreign patent applications (as shown in Table 6-3) will result in a loss in foreign patent value. The rationale for these changes mirrors that of the domestic changes, namely higher filing, search, and examination fees.

Table 6-3

Alternative 1 – Final Fee Schedule – Set and Adjust Patent Fees Lost Patent Value from a Decrease in Applications Filed (Foreign)						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Serialized (New) Application Filings						
Baseline - Application Filings (number of)	205,524	215,829	226,650	238,013	249,944	**1,135,960**
Alt. 1 - Application Filings (number of)	202,751	210,005	217,476	228,379	239,827	**1,098,438**
Alt. 1 - Application Filings (number of-change from Baseline)	(2,773)	(5,824)	(9,174)	(9,634)	(10,117)	**(37,522)**
Granted Serialized Applications						
Alt. 1 - Granted Applications (50% of application filings-change from Baseline)	(1,387)	(2,912)	(4,587)	(4,817)	(5,059)	(18,762)
Alt. 1 - Granted Applications (percent change from Baseline)	-1.3%	-2.7%	-4.0%	-4.0%	-4.0%	**-3.2%**

6.3 Costs of Alternative 2 – Fee Cost Recovery

Costs for Alternative 2 include: (i) a decrease in private patent value; (ii) an increase in the lost patent value due to the estimated decrease in new patent applications filed; (iii) fee schedule design costs; and (iv) an increase in uncertainty. Individual fee amounts and their relationship to other fees in the fee schedule affect the fee schedule design costs. Changes in pendency affect the cost of uncertainty.

6.3.1 Alternative 2: Decrease in Private Patent Value from an Increase in Pendency

As described below, a significant increase in pendency under Alternative 2 would cause a significant decrease in private patent value. Patent application pendency would be higher relative to the Baseline under this alternative because the Office would be unable to hire adequate staff (due to inadequate revenue) to manage both the incoming workload and the backlog in the patent application inventory. Consequently, delayed grant of a patent due to the Office's longer average total pendency under this alternative decreases the value of that patent for both domestic and foreign entities interests.

***Domestic*:** The Office considers that domestic private patent value would decrease under Alternative 2 over the next five years. The Office considers this decrease a significant cost to patent applicants, patent holders, other patent stakeholders, and society. Longer pendency drives the decreased private patent value, and under this alternative, longer pendency would be the result of the Office's inability to recover enough aggregate revenue to increase examination capacity.

Foreign: The Office considers that foreign private patent value will decrease under Alternative 2 due to longer pendency. The trends for foreign stakeholders mirror those of domestic stakeholders, and the reasons are identical: inadequate revenue would result in inadequate staffing, which would limit the Office's ability to manage both the incoming application workload and inventory and result in higher pendency over the five-year period.

6.3.2 Alternative 2: Lost Patent Value from a Decrease in New Patent Applications Filed

Domestic: The estimated patent application volume for Alternative 2 was adjusted for price elasticity because the Office estimates that higher filing, search, and examination fees would result in fewer applications compared to the Baseline.

Table 6-4 shows the estimated number of applications that would be filed for the Baseline and Alternative 2 and the reduction in the number of applications filed due to price elasticity. The Office estimates that the number of new patent applications filed under Alternative 2 would decrease by a total of 278,672 (25.8 percent) over the next five years compared to the Baseline. The Office estimates that the decrease in application filings under Alternative 2 equates to a moderate loss in patent value. Although all of the alternatives in this RIA include a decrease in application filings due to an increase in the fees for filing, search, and examination, the magnitude of the decrease for this alternative is significant and unique to Alternative 2, and the greatest of the alternatives.

Table 6-4

Alternative 2 - Fee Cost Recovery Lost Patent Value from a Decrease in Applications Filed (Domestic)						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Serialized Application Filings						
Baseline - Application Filings (number of)	195,108	204,891	215,163	225,949	237,276	**1,078,387**
Alt. 2 - Application Filings (number of)	174,513	161,636	147,028	154,399	162,139	**799,715**
Alt. 2 - Application Filings (number of-change from Baseline)	(20,595)	(43,255)	(68,135)	(71,550)	(75,137)	**(278,672)**
Granted Serialized Applications						
Alt. 2 - Granted Applications (50% of application filings-change from Baseline)	(10,298)	(21,627)	(34,067)	(35,776)	(37,569)	(139,337)
Alt. 2 - Granted Applications (percent change from Baseline)	-10.6%	-21.1%	-31.7%	-31.7%	-31.7%	**-25.8%**

Foreign: The Office estimates that a decrease in foreign patent applications (as shown in Table 6-5) will result in a loss in patent value under Alternative 2. The trends for foreign stakeholders mirror those of domestic stakeholders, and the reasons are identical, namely, higher filing, search, and examination fees.

Table 6-5

Alternative 2 - Fee Cost Recovery Lost Patent Value from a Decrease in Applications Filed (Foreign)						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Serialized Application Filings						
Baseline - Application Filings (number of)	205,524	215,829	226,650	238,013	249,944	**1,135,960**
Alt. 2 - Application Filings (number of)	183,830	170,265	154,878	162,642	170,795	**842,410**
Alt. 2 - Application Filings (number of-change from Baseline)	(21,694)	(45,564)	(71,772)	(75,371)	(79,149)	**(293,550)**
Granted Serialized Applications						
Alt. 2 - Granted Applications (50% of application filings-change from Baseline)	(10,847)	(22,782)	(35,886)	(37,685)	(39,575)	(146,775)
Alt. 2 - Granted Applications (percent change from Baseline)	-10.6%	-21.1%	-31.7%	-31.7%	-31.7%	**-25.8%**

6.3.3 Alternative 2: Fee Schedule Design Costs

The following discussion of the fee schedule design costs evaluates how well the major fees reflect the key policy considerations, namely *fostering innovation*, *facilitating effective administration of the patent system*, and *offering patent prosecution options for applicants*. This discussion only includes fees for which the Office can draw reasonable conclusions about the costs; therefore, the discussion that follows does not address all of the fees included in Table 5-5. A complete list of fees for Alternative 2 can be found on the USPTO Web site available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1.

a) Utility—Basic Filing, Search, and Examination: Alternative 2 offers the most significant change to the current fee schedule of any of the alternatives, because it reverses the Office's long-established policy consideration to set front-end fees below cost in order to *foster innovation*. Setting the basic utility patent application fees (i.e., filing, search, and examination) at cost ($3,920) would create a barrier for entry into the patent system. For most patent applicants—whether large, small, or micro entities—this fee amount would be a cost to patenting that could cause some patent applicants to completely forego seeking patent protection (*see* section 6.3.1 for the cost associated with an estimated reduction in new patent application filings). As a result, this alternative would result in the largest decrease in application filings and the largest reduction in public disclosure of information of all the alternatives examined. The potential costs to society from reduced innovation include less or inefficient R&D that would not as effectively support economic growth and the creation of high-paying jobs—two tenets of the *Strategy for American Innovation*, as mentioned earlier.

b) Request for Prioritized Examination: Setting the large entity fee for prioritized examination at cost recovery ($4,000) continues to *offer more patent prosecution options for applicants*. Given that the fee is set at cost recovery only for large entities, revenue losses from discounts for small and micro entities must be recovered elsewhere in the fee schedule. However, with less revenue from back-end fees (discussed later in this section) and with most other fees already set at cost recovery, the Office has fewer options for recovering the lost revenue.

c) Request for Continued Examination (RCE): An RCE is sometimes used to resolve prosecution issues during examination. Setting the RCE fee ($1,700) close to the average cost of processing ($1,882) could limit access to this patent service. Given the full cost of the basic utility application fees (*see* above), this higher RCE fee might have a significant adverse impact upon applicants, especially those with the fewest resources (e.g., small and micro entities). Setting all RCE fees at cost recovery is contrary to the fee setting policy factors of *fostering innovation* and *offering patent prosecution options for applicants*, because they would increase costs to applicants to prosecute a patent application at a time when an applicant has less information about the value of their invention.

d) Appeal Fees: Setting the total large entity appeal fees at cost to be paid upon filing a notice of appeal and a brief to appeal an examiner's decision ($4,960) would create a barrier to using this service and would not *foster innovation*. If an examiner withdraws the final rejection to either allow the application or to make other rejections in response to an applicant's notice of appeal and brief, the applicant would have already paid the full cost of the appeal and brief. Moreover, if the examiner allows the application, the costs would be even more significant because Alternative 2 does not provide for staging appeal fees, as compared to Alternatives 1 and 4. This would result in the qualitative cost of *limiting patent prosecution options* or, at least, making it more costly to pursue them effectively.

e) Ex Parte Reexamination, Supplemental Examination, Inter Partes Review, and Post-Grant Review: The AIA includes provisions directing the Office to establish several new procedures (supplemental examination, *inter partes* review, and post-grant review discussed here) intended to offer options for persons wishing to dispute or preempt disputes

concerning IP rights. The services discussed in this section are highly specialized, and the Office's costs for performing them are significant. However, setting these fees at full cost recovery reduces access to these proceedings, which works against the policy factor of providing options for post-prosecution actions.

f) Publication Fee for Early, Voluntary or Normal Publication (PG Pub) & Utility Issue Fee: As mentioned earlier, Alternative 2 does not provide for a subsidy of front-end application fees. Instead, setting the front-end application fees (i.e., filing, search, and examination) (discussed earlier) at cost does not require these back-end fees to be set above cost. This fee design does not support the policy factor of *fostering innovation*.

g) Maintenance Fee - 1st, 2nd, and 3rd Stages: Maintenance fee renewal rates would increase at each stage because the fees are reduced significantly from the Baseline. Table 6-6 compares maintenance fee renewal rates for the Baseline and Alternative 2 over the next five fiscal years. Using price elasticity estimates (*see* USPTO Section 10 Fee Setting – Description of Elasticity Estimates available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1), the Office estimated the change in maintenance fee renewal rates between the Baseline and Alternative 2 for each fiscal year and then analyzed the effect of this change on subsequent commercialization of the inventions protected by patents that are no longer in force. The increase in maintenance fee renewal rates in Alternative 2 is due to the significant decrease in maintenance fees. More patent holders would be willing to pay a lower fee, thus increasing the number of patents being renewed.

Table 6-6

Alternative 2 - Fee Cost Recovery Change in Maintenance Fee Renewal Rates						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Average**
Baseline - Maintenance Fee Renewal Rates						
Stage 1	88.3%	88.8%	88.9%	88.9%	88.9%	**88.8%**
Stage 2	77.6%	80.2%	81.7%	79.2%	80.7%	**79.9%**
Stage 3	70.6%	73.5%	74.8%	72.4%	73.7%	**73.0%**
Alt. 2 - Maintenance Fee Renewal Rates						
Stage 1	88.8%	94.8%	95.3%	95.7%	95.7%	**94.1%**
Stage 2	78.6%	91.5%	93.7%	91.3%	92.8%	**89.6%**
Stage 3	71.2%	82.3%	84.2%	81.8%	83.1%	**80.5%**
Alt. 2 - Maintenance Fee Renewal Rate Changes from Baseline						
Stage 1	0.6%	6.8%	7.2%	7.6%	7.6%	**6.0%**
Stage 2	1.3%	14.1%	14.7%	15.3%	15.0%	**12.1%**
Stage 3	0.8%	12.0%	12.6%	13.0%	12.8%	**10.2%**

With a lower maintenance fee, the Office presumes that some patent owners may reevaluate their patent(s) at each stage and decide to retain their exclusive rights more often than they would with higher maintenance fees. In those circumstances, the claimed invention would not be available for others to use. The Office estimates this result would be a cost to society, because it may increase costs (e.g., licensing) for further innovation and commercialization.

Summary of Fee Schedule Design Costs for Alternative 2

In summary, after analyzing the fee schedule design costs, the Office concludes that while Alternative 2 represents the standard approach to fee setting in the Federal Government, this approach does not support the Office's rulemaking strategies and goals, especially the

important policy considerations that go into the Office's individual fee setting strategy. The largest fee schedule design cost is the loss of a front-end subsidy designed to *foster innovation*, but the impacts of much costlier *patent prosecution options* (e.g., RCEs and appeals) are also noticeable. Overall, Alternative 2 would not offer adequate benefits and in fact would produce appreciable costs, especially when compared to the final fee schedule (Alternative 1).

6.3.4 Alternative 2: Increased Uncertainty

Alternative 2 would cause longer uncertainty in the clarity of patent scope and rights when compared to the Baseline, which represents a cost to patent stakeholders and society because it could likely reduce the incentives and freedom to innovate. Table 6-7 shows the uncertainty indicator of total average pendency for Alternative 2 compared to the Baseline. Beginning with FY 2014, average total pendency for Alternative 2 is already higher than the Baseline—a trend that continues every year thereafter. Pendency continues to increase because aggregate revenue is too low to support an optimum patent examining staff to respond to incoming workload and the patent application inventory.

Table 6-7

Alternative 2 - Fee Cost Recovery Increase in Uncertainty from an Increase in Pendency						
Indicators	**Fiscal Year**					
	FY 2013	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total Change**
Baseline Total Average Pendency (months)	30.1	26.6	25.0	22.7	**21.0**	**-9.1**
Alternative 2 Total Average Pendency (months)	30.1	28.9	29.4	29.8	**31.2**	**1.1**
Average Pendency Change from Baseline (months)	0.0	2.3	4.4	7.1	10.2	**N/A**
Average Pendency Change from Baseline (percent)	0.0%	8.6%	17.6%	31.3%	**48.6%**	**N/A**

For Alternative 2, the Office expects that total average pendency would increase by 1.1 months from 30.1 to 31.2 months, but under the Baseline average pendency would decrease by 9.1 months from 30.1 to 21.0 (as shown in bold in Table 6-7). Compared to the Baseline, Alternative 2 average total pendency would increase 48.6 percent in FY 2017 (as shown in bold in Table 6-7). An increase in pendency causes longer uncertainty in terms of patent scope, rights, and freedom to innovate, and the market for technology. Increased uncertainty also impacts society as potential patent applicants may not become aware of the technological advances due to delays in patent grants, resulting in less innovation.

6.4 Costs of Alternative 3 – Across-the-Board Adjustment

There are two costs for Alternative 3: (i) an increase in the Office's cost of patent operations; and (ii) the lost patent value that occurs from a decrease in new patent applications filed.

6.4.1 Costs for Alternative 3: Increase in the Office's Cost of Patent Operations

The Office determines that there would be a slight increase in the cost of patent operations over the next five years when Alternative 3 costs are compared to Baseline costs (*see* Table 4-3, Table 4-4, and Table 4-5). While this alternative would provide additional revenue compared to the Baseline, the Office would not have sufficient revenue in FY 2013 to hire 1,000 additional patent examiners and thus not achieve patent pendency goals by FY 2016 and FY 2017. In fact, the revenue generated by Alternative 3 during FY 2013 would not only be insufficient to hire 1,000 patent examiners, but would also cause the Office to use $55 million of the operating reserve to pay for the 1,500 patent examiners hired in FY 2012. Instead, additional funding from Alternative 3 would be directed to other priorities, including building the three-month operating reserve.

6.4.2 Alternative 3: Lost Patent Value from a Decrease in New Patent Applications Filed

Domestic: The estimated patent application volume was adjusted for price elasticity since higher filing, search, and examination fees are estimated to result in fewer applications compared to the Baseline. In other words, there would continue to be increases in the number of applications filed, but the rate of increase would be lower compared to the Baseline in the first few years, because of higher filing, search, and examination fees. Table 6-8 shows the estimated number of applications that would be filed for the Baseline and Alternative 3. The slight reduction over the next five years in the number of applications filed is due to price elasticity and results in a loss in patent value.

Based on price elasticity estimates (*see* "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1) for filing, search, and examination fees, patent applications for Alternative 3 are estimated to decrease 0.8 percent over the next five years compared to the Baseline. The Office estimates that this decrease in application filings would equate to a minimal loss in patent value.

Table 6-8

Alternative 3 - Across-the-Board Adjustment Lost Patent Value from a Decrease in New Patent Applications Filed (Domestic)						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Serialized (New) Application Filings						
Baseline - Application Filings (number of)	195,108	204,891	215,163	225,949	237,276	**1,078,387**
Alt. 3 - Application Filings (number of)	194,488	203,590	213,114	223,798	235,016	**1,070,006**
Alt. 3 - Application Filings (change from Baseline)	(620)	(1,301)	(2,049)	(2,151)	(2,260)	**(8,381)**
Granted Serialized Applications						
Alt. 3 - Granted Applications (50% of application filings-change from Baseline)	(310)	(651)	(1,025)	(1,076)	(1,130)	(4,192)
Alt. 3 - Granted Applications (percent change from Baseline)	-0.3%	-0.6%	-1.0%	-1.0%	-1.0%	**-0.8%**

Foreign: The Office estimates that a decrease in foreign patent applications (as shown in Table 6-9) will result in a loss in patent value from decreased foreign patent applications

under Alternative 3. The rationale for these changes mirrors that of the domestic changes, namely, higher filing, search, and examination fees.

Table 6-9

Alternative 3 - Across-the-Board Adjustment Lost Patent Value from a Decrease in New Patent Applications Filed (Foreign)						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Serialized (New) Application Filings						
Baseline - Application Filings (number of)	205,524	215,829	226,650	238,013	249,944	**1,135,960**
Alt. 3 - Application Filings (number of)	204,872	214,459	224,492	235,746	247,563	**1,127,132**
Alt. 3 - Application Filings (change from Baseline)	(652)	(1,370)	(2,158)	(2,267)	(2,381)	**(8,828)**
Granted Serialized Applications						
Alt. 3 - Granted Applications (50% of app filings-change from Baseline)	(326)	(686)	(1,079)	(1,133)	(1,190)	(4,414)
Alt. 3 - Granted Applications (percent change from Baseline)	-0.3%	-0.6%	-1.0%	-1.0%	-1.0%	**-0.8%**

6.5 Costs of Alternative 4 – Initial Proposal to PPAC

Alternative 4 includes two costs: (i) the Office's cost of patent operations; and (ii) lost patent value due to a decrease in new patent application filings. The costs of Alternative 4 are similar to Alternative 1, but the Office's cost of patent operations and lost patent value are both more significant. The biggest difference between this alternative and Alternative 1 is the growth rate of the operating reserve. This alternative achieves the three-month operating reserve target in FY 2016, but to accomplish this, the Office must set several fees at higher rates than presented under Alternative 1.

6.5.1 Alternative 4: Increase in the Office's Cost of Patent Operations

The Office determines that there would be an increase in the cost of patent operations over the next five years when Alternative 4 costs are compared to Baseline costs (*see* Table 4-3, 4-4, and 4-5). The expected increase in the Office's cost of patent operations is a result of the additional patent examination capacity required to reduce pendency and keep pace with incoming applications. Additionally, reaching the three-month operating reserve target in FY 2016 (instead of after the five-year planning period ending in FY 2017, as in Alternative 1) increases the cost of patent operations.

The primary driver for the increase in cost of patent operations is the increased examination capacity to achieve pendency goals and the cost of building a three-month operating reserve by FY 2016 to provide sustainable funding for the Office. Specifically, the Office would increase examination capacity by hiring an optimum size patent examining workforce (e.g., 1,500 new hires in FY 2012 and 1,000 in FY 2013), which would enable the Office to meet the target first action average pendency and total average pendency goals in FY 2016 and FY 2017, respectively. However, other contributing costs include: quality initiatives; increased staffing levels at the PTAB to allow the Office to address the growing inventory of *ex parte* appeals that has developed as a result of increased production from the examining corps; the PTAB's new administrative trial proceedings; large-scale IT improvements; and the nationwide workforce initiative to establish three additional satellite offices around the country.

6.5.2 Alternative 4: Lost Patent Value from a Decrease in New Patent Applications Filed

Domestic: The estimated number of new patent applications filed under Alternative 4 was adjusted for price elasticity since higher filing, search, and examination fees are estimated to result in fewer applications compared to the Baseline. In other words, there would continue to be increases in the number of applications filed, but the rate of increase would be lower compared to the Baseline in the first few years, because of higher filing, search, and examination fees. Table 6-10 shows the estimated number of applications that would be filed for the Baseline and Alternative 4, the reduction in the number of applications filed due to price elasticity, and the resulting loss in patent value.

Based on price elasticity estimates (*see* "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1) for filing, search, and examination fees, patent applications for Alternative 4 would decrease a total of 5.6 percent over the next five years compared to the Baseline (as shown in Table 6-10). The Office considers this decrease in application filings to be a minimal loss in patent value.

Table 6-10

Alternative 4 - Initial Proposal to PPAC Lost Patent Value from a Decrease in New Patent Applications Filed (Domestic)						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Serialized (New) Application Filings						
Baseline - Application Filings (number of)	195,108	204,891	215,163	225,949	237,276	**1,078,387**
Alt. 4 - Application Filings (number of)	190,617	195,459	200,307	210,348	220,893	**1,017,624**
Alt. 4 - Application Filings (change from Baseline)	(4,491)	(9,432)	(14,856)	(15,601)	(16,383)	**(60,763)**
Granted Serialized Applications						
Alt. 4 - Granted Applications (50% of application filings- change from Baseline)	(2,245)	(4,715)	(7,428)	(7,801)	(8,192)	(30,381)
Alt. 4 - Granted Applications (percent change from Baseline)	-2.3%	-4.6%	-6.9%	-6.9%	-6.9%	**-5.6%**

Foreign: The Office considers a decrease in foreign patent applications (as shown in Table 6-11) to result in a loss in patent value under Alternative 4. The rationale for these changes mirrors that of the domestic changes, namely, higher filing, search, and examination fees.

Table 6-11

Alternative 4 - Initial Proposal to PPAC Lost Patent Value from a Decrease in New Patent Applications Filed (Foreign)						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total**
Serialized (New) Application Filings						
Baseline - Application Filings (number of)	205,524	215,829	226,650	238,013	249,944	**1,135,960**
Alt. 4 - Application Filings (number of)	200,794	205,894	211,001	221,578	232,686	**1,071,953**
Alt. 4 - Application Filings (change from Baseline)	(4,730)	(9,935)	(15,649)	(16,435)	(17,258)	**(64,007)**
Granted Serialized Applications						
Alt. 4 - Granted Applications (50% of application filings-change from Baseline)	(2,365)	(4,968)	(7,825)	(8,218)	(8,629)	(32,004)
Alt. 4 - Granted Applications (percent change from Baseline)	-2.3%	-4.6%	-6.9%	-6.9%	-6.9%	**-5.6%**

7 QUALITATIVE BENEFITS

7.1 Description of the Benefits

This section describes the qualitative benefits associated with the alternatives considered in this analysis. Table 7-1 presents an overview of the specific benefits associated with each alternative, since not all benefits apply to each alternative. For example, Alternative 2 results in a decrease in cost of patent operations (due to less expected aggregate revenue) but does not increase private patent value (due to a decrease in pendency). If a benefit applies to a certain alternative, it is denoted with a checkmark.

Table 7-1

Benefit Description	**Alternative 1** Final Rule – Set and Adjust Section 10 Fees	**Alternative 2** Fee Cost Recovery	**Alternative 3** Across-the-Board Adjustment	**Alternative 4** Initial Proposal to PPAC
Decrease in Cost of Patent Operations		✓		
Increase in Private Patent Value from a Decrease in Pendency	✓			✓
Fee Schedule Design Benefits	✓		✓	✓
Decrease in Uncertainty from a Decrease in Pendency	✓			✓

7.2 Benefits of Alternative 1 – Final Fee Schedule – Set and Adjust Patent Fees

The Office identified three benefits for Alternative 1: (i) an increase in private patent value; (ii) fee schedule design benefits; and (iii) a decrease in uncertainty.

7.2.1 Alternative 1: Increase in Private Patent Value from a Decrease in Pendency

Domestic: A change in patent application pendency impacts the value of a patent. Under Alternative 1, private patent value is expected to increase, and the Office determines that this increase is a benefit to patent applicants, patent holders, other patent stakeholders, and society.

Foreign: The impact on foreign stakeholders mirrors that of domestic stakeholders, and the reasons are identical: adequate revenue results in adequate staffing, giving the Office the ability to manage both the incoming application workload and inventory and results in decreased pendency over the five-year period.

7.2.2 Alternative 1: Fee Schedule Design Benefits

Table 5-2 presents the major fees for Alternative 1. The following discussion of the fee schedule design benefits evaluates how well the major fees reflect the key policy considerations, namely, *fostering innovation*, *facilitating effective administration of the patent system*, and *offering patent prosecution options for applicants*. This discussion only includes fees for which the Office can draw reasonable conclusions about the costs; therefore, the discussion that follows does not address all of the fees included in Table 5-2.

A complete list of fees for Alternative 1 can be found on the USPTO Web site available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1.

a) Utility – Basic Filing, Search, and Examination: Currently, the large entity basic filing, search, and examination fees for a utility patent recover slightly more than one-third of the average unit cost for prosecuting a patent application (*see* cost at Table 5-4). This alternative continues the long-standing policy factor of *fostering innovation* by keeping the entry and pre-issue fees below cost with a back-end subsidy to recover the difference.

To help stabilize the USPTO funding model, the Office is increasing the total filing, search, and examination fees in this alternative to recover slightly more than 40 percent of the average unit cost for processing a patent application (*see* cost at Table 5-4). This fee schedule design is a benefit and supports the key policy consideration to *foster innovation.* The disadvantage of increased filing, search, and examination fees is a slight initial reduction in the number of application filings, which could lead to a similarly slight reduction in public disclosure. This is considered a relatively minor cost compared to the benefit of *fostering innovation*.

b) Request for Prioritized Examination: The Office would set the large entity fee at cost instead of further increasing the large entity fee to subsidize the new micro entity discount. The Office intends to recover this lost revenue through other fees set above cost recovery. This benefits applicants and furthers key policy considerations of *fostering innovation* and *offering patent prosecution options for applicants*.

c) Excess Claims, Utility Application Size, and Extension of Time Fees: The increase in excess claims and application size fees facilitates an efficient examination process, which benefits the applicant and the USPTO through more effective administration of patent prosecution. This encourages an applicant to file an application with the most prudent number of claims to enable prompt conclusion of application processing. A more succinct application facilitates faster examination with an expectation of fewer errors. The increase in the extension of time fees incentivizes an applicant to give more consideration to filing an extension of time request, and thereby facilitates the prompt conclusion of application processing, which assists in reducing patent application pendency. Concluding prosecution more quickly also has wider societal benefits, because new ideas can go to market faster and provide technological progress, job creation, and wage growth. All of these fees support the key policy considerations of *facilitating effective administration of the patent system*.

d) Request for Continued Examination (RCE): Alternative 1 divides the fees for an RCE into two parts. The large entity fee for a first RCE is set about 36 percent below cost recovery at $1,200 to *foster innovation* by easing the burden on an applicant needing to resolve outstanding issues with an examiner. The fee for second and subsequent RCEs is set at $1,700, which is slightly below the average cost of processing an RCE ($1,882). Because 70 percent of RCEs are for a first and only RCE, this indicates that applicants often need modest additional time to resolve the outstanding issues with the examiner. When an applicant does not agree with a final rejection notice, the applicant also has the option to file a notice of appeal, for which the fee is also set below cost recovery and less than the fee proposed for the first, and second and subsequent, RCEs (*see* appeal fee information in the following section). The multipart approach to RCE fees in Alternative 1 seeks to *foster*

innovation and *offer patent prosecution options for applicants* to make critical decisions at multiple points in the patent prosecution process.

e) Appeal Fees: Currently, a large entity applicant pays a total of $1,260 to appeal and file a brief, which recovers around 26 percent of the Office's cost of an appeal ($4,799 in FY 2011). Under Alternative 1, a large entity applicant will pay a total of $800 to appeal and file a brief, and a $2,000 fee to forward the appeal file—with the brief and the examiner's answer—to the PTAB for review. Overall, with this fee design, less than one-third of the fee would be paid at the time of notice of appeal, and the remaining amount would be paid after the examiner's answer, but only if the appeal is then forwarded to the PTAB. This staged fee payment structure allows the appellant to reduce the amount invested in the appeal process until the examiner's answer is received and allows applicants to pay less in situations when an application is either allowed or re-opened before being forwarded to the PTAB. This fee design offers *patent prosecution options for applicants* to make critical decisions at multiple points in the patent prosecution process.

f) Supplemental Examination and Ex Parte Reexamination: Alternative 1 reduces fees for a request for supplemental examination and an *ex parte* reexamination ordered as a result of a supplemental examination proceeding from $4,400 and $13,600, respectively, as included in the proposed rule, to $4,400 and $12,100, respectively, which are both below cost. The large entity fee for *ex parte* reexamination is also reduced to $12,000, which is also below the Office's cost of conducting these proceeding. Setting these fees below cost will permit easier access to the processes, which is beneficial to post-grant validity challenges, the overall patent system, and patent quality. Further, given that supplemental

examination and *ex parte* reexamination are also eligible for small and micro entity fee reductions, setting these fees slightly below cost recovery improves access to these services for groups that are likely to have fewer resources.

g) Inter Partes Review, Post-Grant Review, and Covered Business Methods Review: Alternative 1 sets each of the fees for the new administrative trials established by the AIA slightly below cost and improves the fee payment structure via multipart and staged fees, which allows greater access to these new services.

***h) Publication Fee for Early, Voluntary, or Normal Publication and Utility Issue Fees*:** Currently, the PG Pub fee is set to collect over two times the cost to publish a patent, and the issue fee is set to collect over seven times the cost to issue a patent. For Alternative 1, setting the publication fee to zero and decreasing the issue fee help inventors financially at a time when the marketability of their invention is highly uncertain. The reduction offsets the increases in patent prosecution fees (e.g., filing, search, and examination), which supports *fostering innovation* by reducing the cost to the applicant.

i) Maintenance Fees - 1st, 2nd, and 3rd Stages: Under Alternative 1, maintenance fee renewal rates decrease at each stage because the fees increase when compared to the Baseline. Given price elasticity, increased maintenance fees likely would result in reduced renewal rates for certain patents. It is presumed that a significant portion of the patents that are not renewed would be deemed unprofitable by their owners because, for example, the owner did not have the means to produce a competitive product covered by the patent. When maintenance fee payments are discontinued, the exclusive right of the patent is

terminated, and the claimed invention becomes available for others to use. This may lower the cost of R&D for the next generation of innovators and would result in a benefit for society because it may reduce costs (e.g., licensing) for further innovation and commercialization. However, at the same time, higher maintenance fees decrease the net value of a patent, but this cost is considered a second order effect.

For Alternative 1, the estimated average maintenance fee renewal rates are lower compared to the Baseline, because the Office estimates that fewer patent holders would be willing to pay a higher fee, thus decreasing the number of patents renewed. Based on elasticity estimates (*see* "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1), maintenance fee renewal rates are expected to decrease on average over the next five years as follows: 3.9 percent decrease in first stage renewals; 3.8 percent decrease in second stage renewals; and 8.4 percent decrease in third stage renewals (as shown in bold in Table 7-2).

Table 7-2

Alternative 1 – Final Fee Schedule – Set and Adjust Patent Fees Change in Maintenance Fee Renewal Rates						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Average**
Baseline - Maintenance Fee Renewal Rates						
Stage 1	88.3%	88.8%	88.9%	88.9%	88.9%	**88.8%**
Stage 2	77.6%	80.2%	81.7%	79.2%	80.7%	**79.9%**
Stage 3	70.6%	73.5%	74.8%	72.4%	73.7%	**73.0%**
Alt. 1 - Maintenance Fee Renewal Rates						
Stage 1	87.9%	85.0%	84.7%	84.4%	84.4%	**85.3%**
Stage 2	77.4%	76.7%	78.0%	75.4%	76.8%	**76.9%**
Stage 3	70.1%	66.3%	67.2%	64.6%	65.8%	**66.8%**
Alt. 1 - Maintenance Fee Renewal Rates - change from Baseline						
Stage 1	-0.5%	-4.3%	-4.7%	-5.1%	-5.1%	**-3.9%**
Stage 2	-0.3%	-4.4%	-4.5%	-4.8%	-4.8%	**-3.8%**
Stage 3	-0.7%	-9.8%	-10.2%	-10.8%	-10.7%	**-8.4%**

Summary of Fee Design Benefits for Alternative 1: Alternative 1 captures the most fee schedule design benefits of any of the alternatives examined. The Office designed the fee schedule around the three policy factors described in the strategies and goals discussion: *(1) fostering innovation; (2) facilitating effective administration of the patent system; and (3) offering patent prosecution options for applicants*. As demonstrated by the continuation of a front-end/back-end subsidy structure, the reduction of the pre-grant publication and issue fees, and the progressively increasing maintenance fee structure, this alternative designs the fee structure in a way to achieve the Office's rulemaking and operational strategies and goals and benefit patent stakeholders.

7.2.3 Alternative 1: Decrease in Uncertainty from a Decrease in Pendency

Alternative 1 would decrease uncertainty in the clarity of patent scope and rights when compared to the Baseline, which represents a benefit to patent stakeholders and society, because it is expected to increase the incentives and freedom to innovate. Table 7-3 shows the uncertainty indicator of total average pendency for Alternative 1. In Table 7-3, the Office compared the Baseline total patent application pendency to Alternative 1 total pendency.

Table 7-3

Alternative 1 – Final Fee Schedule – Set and Adjust Patent Fees Decrease in Uncertainty from a Decrease in Pendency						
Indicators	**Fiscal Year**					
	FY 2013	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total Change**
Baseline Total Average Pendency (months)	30.1	26.6	25.0	22.7	**21.0**	**-9.1**
Alternative 1 Total Average Pendency (months)	30.1	26.1	23.7	21.0	**18.8**	**-11.3**
Average Pendency Change from Baseline (months)	0.0	-0.5	-1.3	-1.7	-2.2	**N/A**
Average Pendency Change from Baseline (percent)	0.0%	-1.9%	-5.2%	-7.5%	**-10.5%**	**N/A**

Under Alternative 1, the Office expects a significant benefit due to a large reduction in total patent application pendency. From FY 2013 to FY 2017, total average pendency is estimated to decrease by 11.3 months, from 30.1 to 18.8 months. This compares to a Baseline estimated pendency decrease of only 9.1 months, from 30.1 to 21.0 months, over the same period of time. Under Alternative 1, average total pendency would decrease 10.5 percent in FY 2017 (as shown in bold in Table 7-3) compared to the Baseline. Total average pendency decreases under Alternative 1 as the Office would generate enough

aggregate revenue to increase examination capacity through hiring additional patent examiners in FY 2013 to help reduce pendency. An 11.3-month decrease in pendency would reduce uncertainty in the scope of patent rights and validity of claims for patentees, competitors, and new entrants. The overall reduction in uncertainty would be a benefit to patent stakeholders and society.

7.3 Benefits of Alternative 2 – Fee Cost Recovery

The Office identified a decrease in the Office's cost of patent operations as a benefit under Alternative 2. While this is classified as a benefit in the analysis, the lack of sufficient aggregate revenue under this alternative to achieve the Office's goals, including reducing patent application pendency, represents a major cost.

7.3.1 Alternative 2: Decrease in the Office's Cost of Patent Operations

The Office expects an overall decrease in the cost of operations under Alternative 2 compared to the Baseline (from $13.7 billion to $12.3 billion for the five-year period ending in FY 2017, resulting in a decrease of $1.5 billion, or 10.6 percent) (*see* Table 4-3, Table 4-4, and Table 4-5). The decrease in the cost of the Office's patent operations is due to an expected reduction in aggregate revenue. Aggregate revenue would decrease as a result of higher front-end fees, which could create barriers to entry for applicants, thus limiting the number of incoming patent applications and in turn the number of patents that would be maintained. This cost reduction is classified as a benefit to patent stakeholders and society.

7.4 Benefits of Alternative 3 – Across-the-Board Increase

For Alternative 3, the Office identified fee schedule design benefits associated with setting individual fees to further key policy considerations.

7.4.1 Alternative 3: Fee Schedule Design Benefits

Table 5-7 presents the major fees for Alternative 3. The following discussion of the fee schedule design costs evaluates how well the major fees reflect the key policy considerations, namely, *fostering innovation*, *facilitating effective administration of the patent system*, and *offering patent prosecution options for applicants*. This discussion only includes fees for which the Office can draw reasonable conclusions about the costs; therefore, the discussion that follows does not address all of the fees included in Table 5-7. A complete list of fees for Alternative 3 can be found on the USPTO Web site available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1.

a) Utility—Basic Filing, Search, and Examination: Currently, the large entity basic filing, search, and examination fees for a utility patent recover slightly more than one-third of the average unit cost for prosecuting a patent application. The long-standing policy consideration of *fostering innovation* by keeping the entry and pre-issue fees low would continue under Alternative 3 by maintaining this back-end subsidy of front-end fees. However, the application fees (i.e., filing, search, and examination) included in Alternative 3 do not attempt to realign the individual fees with costs, as in Alternatives 1 and 4. For example, under Alternative 3, as with the Baseline, approximately 51 percent of the cost to prosecute an application is estimated to occur during examination while only 20 percent of the fee amount is derived from the examination fee.

b) Excess Claims, Application Size, and Extension of Time Fees: The Office would increase excess claims and application size fees consistent with the across-the-board increase for Alternative 3. This would maintain the key policy consideration that exists in the Baseline today of *facilitating effective administration of the patent system*, which benefits the applicant and the USPTO by encouraging an applicant to file an application with the most prudent number of claims to enable prompt conclusion of application processing. A similar increase would be made to the extension of time fees so that applicants give additional consideration whether to file an extension of time request and thereby promote the prompt conclusion of application processing, which assists in reducing patent application pendency.

c) Request for Continued Examination (RCE): In Alternative 3, the fee for RCEs would remain significantly below cost, as in the Baseline. This could be viewed as a benefit by providing greater access to this service, which helps *foster innovation*. However, keeping the fee significantly below cost might cause those applicants that do not use RCEs to effectively subsidize those that do. Also, Alternative 3 does not include the benefit of a multipart RCE structure to *offer patent prosecution options for applicants* as discussed under Alternative 1.

d) Appeal Fees: The Office would continue to subsidize appeals fees under this alternative to offer applicants another prosecution option by which to secure patent rights if the initial application proved unsuccessful. This helps *foster innovation* by keeping the costs low for applicants to continue patent application prosecution. However, Alternative 3

would not close the gap between fee and cost, so those applicants that do not use appeals would be effectively subsidizing those that do. In addition, Alternative 3 does not provide the benefit of appeals staging options (*offering patent prosecution options for applicants*) provided in Alternatives 1 and 4.

***e) Publication Fee for Early, Voluntary or Normal Publication & Utility Issue Fee*:** Both of these fees are revenue recovery fees. That is, their cost to the Office is relatively small but applicants pay these fees after they have completed the patent prosecution and reached the notice of allowance stage. This subsidizes the front-end fees to help *foster innovation*. However, Alternative 3 would not reconfigure back-end fees to better account for when an applicant is likely to have the most information about the value of the claimed invention and be best suited to paying a fee.

f) Maintenance Fees - 1st, 2nd, 3rd Stage: Under Alternative 3, the increase to all three stages of maintenance fees maintains the existing policy of subsidizing front-end costs through maintenance fees, and maintains the fee ratio between the three renewal stages. Table 7-4 details maintenance fee renewal rates for the Baseline and Alternative 3 over the next five fiscal years.

Table 7-4

Alternative 3 - Across-the-Board Adjustment Change in Maintenance Fee Renewal Rates						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Average**
Baseline - Maintenance Fee Renewal rates						
Stage 1	88.3%	88.8%	88.9%	88.9%	88.9%	**88.8%**
Stage 2	77.6%	80.2%	81.7%	79.2%	80.7%	**79.9%**
Stage 3	70.6%	73.5%	74.8%	72.4%	73.7%	**73.0%**
Alt. 3 - Maintenance Fee Renewal rates						
Stage 1	88.2%	88.5%	88.5%	88.5%	88.5%	**88.4%**
Stage 2	77.6%	79.4%	80.9%	78.4%	79.8%	**79.2%**
Stage 3	70.5%	72.7%	74.1%	71.6%	72.9%	**72.4%**
Alt. 3 - Maintenance Fee Renewal Rates Change from Baseline						
Stage 1	-0.1%	-0.3%	-0.4%	-0.4%	-0.4%	**-0.3%**
Stage 2	0.0%	-1.0%	-1.0%	-1.0%	-1.1%	**-0.8%**
Stage 3	-0.1%	-1.1%	-0.9%	-1.1%	-1.1%	**-0.9%**

For Alternative 3, the estimated maintenance fee renewal rates are slightly lower compared to the Baseline. Based on elasticity estimates (*see* "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1), maintenance fee renewal rates are expected to decrease on average over the next five years as follows: a 0.3 percent decrease in first stage maintenance fee renewals; a 0.8 percent decrease in second stage renewals; and a 0.9 percent decrease in third stage maintenance fee renewals (as shown in bold in Table 7-4). As shown, increased maintenance fees would likely result in reduced maintenance fee renewal rates for certain patents.

Summary of Fee Design Benefits for Alternative 3: Overall, the fee schedule design for Alternative 3 maintains the key policy considerations in the current fee schedule (Baseline) to *foster innovation* and *facilitate effective administration of the patent system*. However, it does not offer some of the fee schedule design benefits in Alternative 1, such as multipart RCE fees and staged appeal fees to support *offering patent prosecution options for applicants*.

7.5 Benefits of Alternative 4 – Initial Proposal to PPAC

The Office identified three benefits related to Alternative 4: (i) an increase in private patent value resulting from a decrease in patent application pendency; (ii) fee schedule design benefits; and (iii) a decrease in uncertainty.

7.5.1 Alternative 4: Increase in Private Patent Value from a Decrease in Pendency

Domestic: A change in patent application pendency impacts the value of a patent. Under Alternative 4, the Office expects that private patent value would increase (relative to the Baseline), which benefits patent applicants, patent holders, other patent stakeholders, and society. Average total pendency would decrease under Alternative 4 because the Office would generate enough aggregate revenue to increase examination capacity by hiring 1,000 additional patent examiners in FY 2013.

Foreign: The impact on foreign stakeholders mirrors those of domestic stakeholders, and the reasons are identical: adequate revenue results in adequate staffing, giving the Office the ability to manage both the incoming application workload and inventory and results in decreased pendency over the five-year period.

7.5.2 Alternative 4: Fee Schedule Design Benefits

Table 5-9 presents the major fees for Alternative 4. The following discussion of the fee schedule design costs evaluates how well the major fees reflect the key policy considerations, namely, *fostering innovation*, *facilitating effective administration of the patent system*, and *offering patent prosecution options for applicants*. This discussion only includes fees for which the Office can draw reasonable conclusions about the costs; therefore, the discussion that follows does not address all of the fees included in Table 5-9. A complete list of fees for Alternative 4 can be found on the USPTO Web site available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1.

a) Utility—Basic Filing, Search, and Examination: Currently, the large entity basic filing, search, and examination fees for a utility patent recover slightly more than one-third of the average unit cost for prosecuting a patent application, while a small entity application recovers around 17 percent of the average unit cost (*see* cost at Table 5-4). Alternative 4 continues the long-standing policy factor of *fostering innovation* by keeping the entry (front-end) fees low using a back-end subsidy.

To help stabilize the USPTO funding model, the Office would increase the total filing, search, and examination fees under Alternative 4 to recover slightly more than 40 percent of the average unit cost for processing a patent application (*see* cost at Table 5-4). This fee schedule design is a benefit and supports the key policy consideration to *foster innovation.* The disadvantage of increased filing, search, and examination fees under Alternative 4 is an initial reduction in the number of application filings, which could result in a slight decrease

in public disclosure. This is considered a relatively minor cost compared to the benefit of *fostering innovation*, but this cost is greater under Alternative 4 than it is under Alternatives 1 and 3.

b) Request for Prioritized Examination: The Office would set the large entity fee at cost instead of further increasing the fee to subsidize the new micro entity discount and recover this lost revenue through other fees that would be set above cost recovery. This benefits applicants and further the key policy considerations of *fostering innovation* and *offering patent prosecution options for applicants*.

c) Excess Claims, Application Size, and Extension of Time Fees: Under Alternative 4, the Office would increase excess claims and application size fees to facilitate an efficient examination process, which benefits the applicant and the USPTO by *facilitating effective administration of the patent system*. This design encourages applicants to file only the most prudent number of claims in an application to enable prompt conclusion of application processing. A more succinct application facilitates faster examination with an expectation of fewer errors. Alternative 4 also would increase the extension of time fees so that applicants give more consideration to whether to file an extension of time request, thereby facilitating the prompt conclusion of application processing, which assists in reducing patent application pendency. Concluding prosecution more quickly also has wider societal benefits, because new ideas can go to market faster and provide benefits to society including technological progress, job creation, and wage growth. All of these fees support the key policy considerations of *facilitating effective administration of the patent system*.

***d) Request for Continued Examination (RCE)*:** Applicants typically file an RCE when they choose to continue to prosecute an application before the examiner, rather than appeal its rejection or abandon the application. Under Alternative 4, the Office would set the fee for an RCE slightly below cost, which would be an increase but still *offer patent prosecution options for applicants*. The Office recognizes that for many applicants, an RCE is one way to reach an allowance, so the Office would not want to discourage or limit this processing option by setting the RCE fee above cost. This fee schedule design also balances the desire to make RCEs reasonably affordable, while noting the strain they put on the patent system. This approach was refined under Alternative 1 to include a tiered structure for RCEs based on feedback from the PPAC.

e) Appeal Fees: Under Alternative 4, the Office would set a $1,500 notice of appeal fee and a $0 fee when filing the brief. Both of these actions would occur prior to the preparation of an examiner's answer (and forwarding of the appeal to the PTAB). The Office recognizes that after some notices of appeal are filed, the matter gets resolved and there is no need to take the ultimate step of forwarding the appeal to the PTAB for a decision. The Office also would set a $2,500 fee for the appellant to forward the appeal file—with the brief and the examiner's answer—to the PTAB for review. Overall, under Alternative 4, approximately one-third of the fee would be paid at the time of notice of appeal and the remaining amount would be paid after the examiner's answer, but only if the appeal is then forwarded to the PTAB. This fee schedule design allows the appellant to reduce the amount invested in the appeal process until receiving the examiner's answer.

Staging the appeal fees in this manner would allow applicants to pay less in situations when an application is either allowed or re-opened before being forwarded to the PTAB. This fee design offers *patent prosecution options for applicants* by allowing applicants to make critical decisions at multiple points in the patent prosecution process.

f) Supplemental Examination and Ex Parte Reexamination: Under Alternative 4, the Office would set the request for supplemental examination, supplemental examination, and request for *ex parte* reexamination fees to be at or slightly greater than the cost of conducting the proceeding. The expected benefit of setting these fees above cost is that the higher fees would encourage applicants to submit applications with all relevant information during initial examination, which achieves compact prosecution and this *facilitates effective administration of the patent system*. In all cases, a complete and accurate patent file, with all supporting documentation, benefits the overall IP system even if the higher fee might limit how many people would be able to pursue the patent service. Alternative 1 provides a revised approach to these fees based on feedback from PPAC and the public during the February 2012 public hearings. (*See* the final rule for additional detail on the PPAC public hearings).

g) Inter Partes Review and Post-Grant Review, and Covered Business Methods Review: The new administrative trial proceedings established in the AIA are intended to offer options for persons wishing to dispute IP rights. These services are highly specialized and the Office's costs for performing them are significant, so the fees would be set at cost under Alternative 4. Allowing the Office to recoup the cost for performing these specialized services would *facilitate effective administration of the patent system*.

h) Combined Pre-Grant Publication (PG Pub) and Issue Fee: Because both the PG Pub and Issue fees must be paid before a patent is granted, Alternative 4 combines the fees to streamline the fee schedule. Under Alternative 4, the Office would decrease the combined fee to a relatively low level because the patenting system benefits from publishing applications. Further, the cost of publishing and issuing a patent is relatively low, and the fee reduction contributes to the alignment of front-end to back-end fees and offsets the increase in front-end fees, enabling the fee schedule to continue *fostering innovation*. In addition, many patent owners do not typically possess enough information to know the value of their invention until a few years after a patent is granted. Decreasing these fees helps inventors financially at a time when the marketability of their invention is unclear. The payment of an issue fee is also important to forecast future maintenance fee payments.

i) Maintenance Fees - 1st, 2nd, and 3rd Stages: Under Alternative 4, maintenance fee renewal rates would decrease at each stage because the fees increase compared to the Baseline. The Office presumes that a significant portion of these patents that are not renewed would be deemed unprofitable by their owners because, for example, the owner did not have the means to produce a competitive product covered by the patent. When maintenance fee payments are discontinued, the exclusive right of the patent is terminated and the subject matter of the patent would be available for others to use, which may lower the cost of R&D for the next generation of innovators. This results in a benefit for society because it may reduce costs (e.g., licensing) for further innovation and commercialization. However, at the same time, the higher maintenance fees decrease the net value of the patent, but this is considered a second order effect.

Table 7-5 details maintenance fee renewal rates for the Baseline and Alternative 4 over the next five fiscal years. For Alternative 4, the estimated average maintenance fee renewal rates are lower compared to the Baseline and Alternative 1, because the Office estimates that fewer patent holders would be willing to pay a higher fee, thus decreasing the number of patents renewed. Based on elasticity estimates (*see* "USPTO Section 10 Fee Setting – Description of Elasticity Estimates" available at http://www.uspto.gov/aia_implementation/fees.jsp#heading-1), maintenance fee renewal rates are expected to decrease on average over the next five years as follows: a 3.9 percent decrease in first stage renewals; a 3.8 percent decrease in second stage renewals; and a 9.1 percent decrease in third stage renewals (as shown in bold in Table 7-5).

Table 7-5

Alternative 4 - Initial Proposal to PPAC Change in Maintenance Fee Renewal Rates						
Indicators	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Average**
Baseline - Maintenance Fee Renewal Rates						
Stage 1	88.3%	88.8%	88.9%	88.9%	88.9%	**88.8%**
Stage 2	77.6%	80.2%	81.7%	79.2%	80.7%	**79.9%**
Stage 3	70.6%	73.5%	74.8%	72.4%	73.7%	**73.0%**
Alt. 4 - Maintenance Fee Renewal Rates						
Stage 1	87.9%	85.0%	84.7%	84.4%	84.4%	**85.3%**
Stage 2	77.4%	76.7%	78.0%	75.4%	76.8%	**76.9%**
Stage 3	70.0%	65.8%	66.6%	64.0%	65.2%	**66.3%**
Alt. 4 - Maintenance Fee Renewal Rate Change from Baseline						
Stage 1	-0.5%	-4.3%	-4.7%	-5.1%	-5.1%	**-3.9%**
Stage 2	-0.3%	-4.4%	-4.5%	-4.8%	-4.8%	**-3.8%**
Stage 3	-0.8%	-10.5%	-11.0%	-11.6%	-11.5%	**-9.1%**

Summary of Fee Design Benefits for Alternative 4: Alternative 4 includes several of the fee schedule design benefits presented in Alternative 1 (the final fee schedule). Alternative 4 also supports rapid growth of the operating reserve, which would help the Office implement a sustainable funding model for patent operations—a goal that provides benefits to both the Office and the larger IP community. Like Alternative 1, Alternative 4 would set the fees for several common patent services at or below their cost to the Office—thereby providing incentives for applicants to enter the patent system (*fostering innovation*) and then continue through the process by *offering patent prosecution options*. Alternative 4 also *facilitates effective administration of the patent system* by incentivizing compact prosecution and permitting the Office to recoup fees for performing highly specialized services.

Despite the numerous identified benefits, the costs associated with the rapid growth of the operating reserve are not negligible. Higher fees reduce applicant benefits even as they speed the Office's progress toward the sustainable funding goal. Based on stakeholder feedback in response to Alternative 4, the Office modified the fee schedule design to develop Alternative 1, which increases the time period to build the operating reserve and offers more net benefits.

7.5.2.1 Alternative 4: Decrease in Uncertainty from a Decrease in Pendency

Alternative 4 would decrease uncertainty in the clarity of patent scope and rights when compared to the Baseline, which represents a benefit to patent stakeholders and society because it is expected to increase the incentives and freedom to innovate. Table 7-6 shows the uncertainty indicator of total average pendency for Alternative 4. In Table 7-6, the

Office compared the Baseline total patent application pendency to Alternative 4 total pendency.

Table 7-6

Alternative 4 - Initial Proposal to PPAC Decrease in Uncertainty from a Decrease in Pendency						
Indicators	**Fiscal Year**					
	FY 2013	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Total Change**
Baseline Total Average Pendency (months)	30.1	26.6	25.0	22.7	**21.0**	**-9.1**
Alternative 4 Total Average Pendency (months)	30.1	26.1	23.7	21.0	**18.8**	**-11.3**
Average Pendency Change from Baseline (months)	0.0	-0.5	-1.3	-1.7	-2.2	**N/A**
Average Pendency Change from Baseline (%)	0.0%	-1.9%	-5.2%	-7.5%	**-10.5%**	**N/A**

For Alternative 4, the average total pendency is expected to decrease by 11.3 months from 30.1 to 18.8 months for the period of FY 2013 through FY 2017, as compared to a decrease of 9.1 months from 30.1 to 21.0 months for the Baseline over the same period of time. Compared to the Baseline, total average patent application pendency under Alternative 4 would decrease 10.5 percent in FY 2017 (as shown in bold in Table 7-6). Total average pendency would decrease under Alternative 4 as compared to the Baseline too because the Office would generate enough aggregate revenue to increase examination capacity through hiring 1,000 additional patent examiners in FY 2013. This decrease in total average patent application pendency would reduce uncertainty regarding scope of patent rights and validity of claims for patentees, competitors, and new entrants. The overall reduction in uncertainty is a benefit to patent applicants, patent holders, other patent stakeholders, and society by advancing commercialization of new technologies and the jobs they can create.

8 ACHIEVEMENT OF THE RULEMAKING GOALS AND STRATEGIES

The Office analyzed each alternative's specific qualitative costs and benefits as described in sections 6 and 7. As presented in section 1.3, the Office assessed each alternative against several strategies and goals. Section 3 presents a summary comparison of the costs and benefits across the alternatives and provides a ranking of the alternatives based on the comparison. This section presents a summary of certain advantages and disadvantages for the alternatives not directly captured in the qualitative costs and benefits related to the Office's strategies and goals.

8.1 Achievement of the Rulemaking Strategies and Goals

Aside from each alternative's qualitative costs and benefits, the alternatives have their own set of expected outcomes that can be characterized as advantages or disadvantages. These outcomes agree, for the most part, with the Office's strategies and goals. The Office analyzed each alternative's ability to achieve a set of strategies and goals meant to benefit patent applicants, patent holders, other patent stakeholders, and society.

Table 8-1 below summarizes whether the Baseline and each alternative achieves the rulemaking's strategies and goals. Following the table is a discussion of each strategy and goal, and the specific outcomes that contribute to the Office achieving them.

Table 8-1

Comparison of Ability to Achieve Planned Improvements Across Alternatives					
Strategy or Goal	**Baseline**	**Alternatives**			
		1 – Final Rule – Set and Adjust Section 10 Fees	**2 – Fee Cost Recovery**	**3 – Across-the-Board Adjustment**	**4 – Initial Patent Fee Schedule Proposed to PPAC**
Strategy 1: Generate sufficient revenue to recover aggregate costs					
Aggregate revenue is sufficient to recover aggregate costs	Yes	Yes	Yes *(With risks)*	Yes	Yes
Goal: Sustainable Funding Model for Operations					
Build three-month operating reserve	Yes *(by FY 2017)*	Yes *(after FY 2017)*	No	Yes *(by FY 2016)*	Yes *(by FY 2016)*
Goal: Optimize Patent Timeliness and Quality by Reducing Patent Application Backlog and Pendency					
Reduce 1st action pendency to 10 months by FY 2016	No	Yes	No	No	Yes
Reduce total average pendency to 20 months by FY 2017	No	Yes	No	No	Yes
Strategy 2: Set Individual Fees to Further Key Policy Considerations					
Implement key policy considerations	Partial	Yes	No	Partial	Partial
Apply micro-entity discount	No	Yes	Yes	Yes	Yes

Aggregate revenue is sufficient to recover aggregate costs: As shown in Table 8-1, the Office expects to generate sufficient revenue to recover aggregate costs under the Baseline and all four alternatives. However, the Office would need to make operational adjustments to recover aggregate costs under Alternative 2. Although lower Office revenue provides a short term advantage to society through a lower cost of patent operations, Alternative 2 does not provide sufficient aggregate revenue to accomplish the majority of the Office's goals and strategies, which provide long term benefits to society. Additionally, under both Alternatives 2 and 3, the Office would not bring in enough revenue to increase examiner capacity by hiring 1,000 examiners in FY 2013, as planned.

Build three-month operating reserve: Alternatives 1, 3, and 4 are expected to provide sustainable funding for the Office by achieving a three-month operating reserve. A three-month operating reserve would allow the Office to sustain operations during temporary fluctuations in the demand for products and services. Alternatives 3 and 4 would build the reserve by FY 2016, while Alternative 1 would gradually build a three month reserve after FY 2017 (by FY 2018).

Optimize Patent Timeliness and Quality by Reducing Patent Application Backlog and Pendency: Under Alternatives 1 and 4, the Office expects to reduce first action pendency to ten months by FY 2016, and to reduce total pendency to 20 months by FY 2017. To achieve these pendency goals, the Office would need to bring in enough aggregate revenue to increase examination capacity by hiring an optimum size patent examining workforce

(i.e., 1,500 new hires in FY 2012 and 1,000 new hires in FY 2013). The Baseline, Alternative 2, and Alternative 3 would not reduce first action or total pendency to the desired levels over the next five years, as the Office would not bring in enough aggregate revenue to hire an additional 1,000 patent examiners in FY 2013.

Implement Key Policy Considerations: The Office's three policy considerations are *fostering innovation, facilitating effective administration of the patent system,* and *offering patent prosecution options for applicants*. As discussed above, Alternative 1 achieves each of the three key policy considerations, while the Baseline and Alternatives 3 and 4 only achieve some of them. The Baseline does not increase *patent prosecution options for applicants*. Alternative 3 fails to implement policy considerations beyond what exists in the Baseline via the fee schedule design (e.g., no multipart RCE fees or staged appeal fees to *offer patent prosecution options for applicants*). Compared to Alternative 1, Alternative 4 does not offer as many patent prosecution options for applicants, such as the multipart and staged fees for RCEs and administrative trials.

Apply Micro Entity Discount: Given that Baseline fees were set prior to setting or adjusting fees using section 10 of the AIA, the Baseline does not include micro entity fee reductions and the scope of fees eligible for small entity fee reductions is smaller, because the earlier authority was more limited. However, each of the four alternatives applies small and micro entity discounts to the fees eligible under section 10(b). In fact, given the scope of section 10(b), small and micro entity discounts would be available across all four alternatives for more than 25 patent fees that do not qualify for a small entity discount under the Baseline.

APPENDIX A: References

The Office references several documents used for information and guidance to complete several sections of this RIA. Many of these documents are available for public inspection at the USPTO or at the appropriate Web site. The following is a list of each reference's citation and associated electronic location (when available):

35 U.S.C. § 1-376, available at http://uscode.house.gov/download/title_35.shtml.

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Office of Management and Budget, *Regulatory Impact Analysis: Frequently Asked Questions (FAQs)* (2011), *available at* http://www.whitehouse.gov/sites/default/files/omb/circulars/a004/a-4_FAQ.pdf.

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United States General Accounting Office, GAO-08-386SP, *Federal User Fees: A Design Guide* (2008), *available at* http://www.gao.gov/assets/210/203357.pdf.

* Part of the information on which the Office based its elasticity estimates are copyrighted materials and are available for inspection at the USPTO headquarters (600 Dulany Street, Alexandria, Virginia).

United States Patent and Trademark Office, *USPTO 2010-2015 Strategic Plan* (2010), *available at* http://www.uspto.gov/about/stratplan/index.jsp#heading-1.

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APPENDIX B: Acronyms

ABC – Activity-based costing

ABI – Activity-based information

AIA – Leahy-Smith American Invents Act

CBO – Congressional Budget Office

CPI – Consumer Price Index for All Urban Consumers, as determined by the Secretary of Labor

FASAB – Federal Accounting Standards Advisory Board

FY – Fiscal Year

GAO – Government Accountability Office

IG – Inspector General

IP – Intellectual Property

MCA – Managerial cost accounting

NPRM – Notice of Proposed Rulemaking

OMB – Office of Management and Budget

PPAC – Patent Public Advisory Committee

PPM – Patent Pendency Model

PTA – Patent Term Adjustment

PTAB – Patent Trial and Appeal Board

PTE – Patent Term Extension

R&D – Research and Development

RCE – Request for Continued Examination

RGDP – Real Gross Domestic Product

RIA – Regulatory Impact Analysis

SFFAS – Statement of Federal Financial Accounting Standards

USPTO – United States Patent and Trademark Office