

Pacific Gas and Electric Company's Non-Tariffed Products and Services (NTP&S) Information-Only Report

Pursuant to Decision (D.) 11-05-018, Pacific Gas and Electric Company (PG&E) is authorized to provide non-tariffed products and services (NTP&S) already approved for use by the other California investor owned utilities (IOUs) starting thirty (30) days after PG&E provides an information-only report regarding the categories it plans to offer. PG&E provided its first non-tariffed products and services (NTP&S) information-only report to the Energy Division on September 30, 2011. Following Energy Division's response to PG&E's information-only report on October 28, 2011, PG&E met with the Energy Division on December 6, 2011 to better understand Energy Division's comments and concerns. PG&E is submitting this revised information-only report to address the concerns that Energy Division has shared with PG&E.

In compliance with D.11-05-018, the following three items are covered for each category:

1. The underutilized or excess capacity used to provide the non-tariffed product and service;
2. The steps that will be taken by PG&E to ensure that the project will not affect the quality or cost of the utility service;
3. Proof that the expanded non-tariffed product and service will not distort non-utility markets or be anti-competitive.¹

As requested by the Energy Division, PG&E's revised report includes more extensive descriptions of each category with examples to give the Energy Division a better sense of how these services will be performed. In addition, it provides descriptions of the assets used to provide these services and an overview of the market for the service that includes existing firms, ease of entry, and PG&E's estimate of prices charged for these services. PG&E plans to commence offering the NTP&S listed in this report thirty days after providing it to the Energy Division. This revised report is being made available to everyone on service lists R.05-10-030 and A.09-12-020 rather than just the parties as requested by Energy Division. This report includes the following categories from the other IOUs' NTP&S catalogs:

NTP&S category	Reference utility
Other consulting services	SDG&E
Operations services for other utilities, energy service providers, municipalities and others	SCG
Geographical Information Systems (GIS) services	SCE
Billing and Customer Communication Center services for Non-ESPs	SCE
Energy efficiency engineering, consulting and technical services	SCE
Use of utility software	SCE
Use of utility held patents	SCE
Use of communications and computing systems	SCE

Table 1 provides a summary of the eight (8) NTP&S categories from other IOU catalogs that PG&E plans to offer including references to other IOU's advice letters, projects currently under consideration by PG&E and estimates of annual costs and revenues² for the category. Attachments A - H provide detailed information for each NTP&S category to demonstrate compliance with the requirements of D.11-05-018.

¹ D. 11-05-018, pg. 25.

² PG&E provides this estimate in accordance with D.11-05-018, FN 15.

Table 1
Reference table of the NTP&S Categories to be added to PG&E's Catalog

Existing NTP&S category from other IOU catalogs	References to other IOU advice letter filings	Projects currently under consideration by PG&E.	Attachment with details on category descriptions and items 1 – 3 in compliance with D.11-05-018
Other Consulting Services	SDG&E 1077-E/ 1081-G • As	<p>set management services for an electric distribution system owner.</p> <p>Initial Annual Cost forecast: \$0 - \$20,000</p> <p>Initial Annual Revenue forecast: \$0 - \$30,000</p>	See Attachment A
Operations Services for Other Utilities, Energy Service Providers, Municipalities and Others	SCG_AL2669; as modified by SCG_AL2669-B	<ul style="list-style-type: none"> • Materials management and procurement services • Training of operations personnel • Billing and collection services <p>Initial Annual Cost forecast: \$0 - \$100,000</p> <p>Initial Annual Revenue forecast: \$0 - \$300,000</p>	See Attachment B
Geographic Information Systems (GIS) Services	SCE 1286-E-A	<ul style="list-style-type: none"> • Providing maps and graphical presentation of various GIS information to assist cities and other agencies. <p>Initial Annual Cost forecast: \$0 - \$10,000</p> <p>Initial Annual Revenue forecast: \$0 - \$20,000</p>	See Attachment C
Billing and Customer Communications Center Services	SCE 1286-E-A	<ul style="list-style-type: none"> • Help desk services for clients' customer calls. <p>Initial Annual Cost forecast: \$0 - \$30,000</p> <p>Initial Annual Revenue forecast: \$0 - \$50,000</p>	See Attachment D

Existing NTP&S category from other IOU catalogs	References to other IOU advice letter filings	Projects currently under consideration by PG&E.	Attachment with details on category descriptions and items 1 – 3 in compliance with D.11-05-018
Energy Efficiency Engineering, Consulting and Technical Services	SCE 1286-E-A	<ul style="list-style-type: none"> • Facilities engineering, analysis, and commissioning Initial Annual Cost forecast: \$0 - \$50,000 Initial Annual Revenue forecast: \$0 - \$80,000	See Attachment E
Use of Utility Software	SCE 1286-E-A	<ul style="list-style-type: none"> • Licensing of PG&E software (such as core load forecast model, fleet management software, outage management software) Initial Annual Cost forecast: \$0 - \$50,000 Initial Annual Revenue forecast: \$0 - \$200,000	See Attachment F
Use of Utility Held Patents	SCE 1286-E-A	<ul style="list-style-type: none"> • Licensing of technologies developed and owned by PG&E (such as an apparatus for cleaning sub-surface electrical enclosures) Initial Annual Cost forecast: \$0-\$20,000 Initial Annual Revenue forecast: \$0-\$100,000	See Attachment G
Use of Communications and Computing Systems	SCE 1286-E-A	<ul style="list-style-type: none"> • Marketing of third parties' right of ways, poles, towers and other facilities for communication-related purposes • Infrastructure-related telecommunication and computing services Initial Annual Cost forecast: \$0 - \$50,000 Initial Annual Revenue forecast: \$0 - \$200,000	See Attachment H

Attachment A

Other Consulting Services

Description of service

Other Consulting Services is a category that includes consulting in the areas of engineering design, maintenance, operations, service restoration business processes, standards, and/or business rules for gas and electric distribution and transmission systems. *Other Consulting Services* could be provided to utilities, power plant owners/operators, and/or related industries that would have a need for PG&E's expertise. PG&E has expertise that could be offered as *Other Consulting Services* including but are not limited to the areas of electric and gas transmission and distribution design and engineering, electric and gas systems operations design and engineering, electric and gas systems maintenance, electric and gas systems restoration, electric and gas procurement processes, electric and gas systems scheduling processes, electric and gas systems reliability, electric and gas systems asset strategy, electric and gas systems technology and information strategy, co-generation interface engineering and training to provide these services. These areas of expertise are necessary for the present and future planning, design, operations, maintenance, and reliability of PG&E's utility system.

PG&E will make *Other Consulting Services* available to customers on as-needed basis depending on availability of existing resources. Unlike traditional consulting services practices, PG&E's agreements for these services will reserve the right to divert resources to fulfill utility obligations. Depending on the location of the customer, PG&E could provide these services over the phone or in-person at a PG&E location. Travel to customer site will be limited and only as needed. Any hardware and software applications needed for these services will be used only during time periods when they are not being used to perform utility functions. Similarly, the primary job of personnel involved with providing these services will be to perform utility related activities. Any time spent by these personnel on performing non-tariffed *Other Consulting Services* will be measured and accounted for separately. This tracking will allow PG&E to periodically review use of the personnel and/or resources to ensure that a potential non-tariffed project will not constrain PG&E's ability to support utility functions.

As an example of *Other Consulting Services*, an electric distribution system owner like a Federal Air Force Base ("the AFB") could request PG&E to analyze their existing electric distribution system with the goal of having PG&E establish an inventory and maintenance program for the major system components (transformers, breakers, splice points, etc.). PG&E would propose the most optimal method for inventorying the existing major components in the AFB's electric distribution system and would establish a customized maintenance program for the components based on either time intervals or condition based maintenance. PG&E could inventory the existing components and enter the data into a customized or standard software application for the AFB and also set triggers in the software application to notify the AFB's facilities management personnel to perform routine maintenance or inspection of their electric distribution system components based on the criteria recommended by PG&E. PG&E would charge the AFB for this service based on the incremental hours spent by PG&E's Asset Management Specialists and

other technical personnel who worked on this project, multiplied by a market-based hourly rate which would at a minimum cover PG&E's standard costs for such personnel.

1. The underutilized or excess capacity used to provide the non-tariffed product and service:

Other Consulting Services will make use of utility assets and capacity that were acquired for the purpose of and are necessary and useful in supporting PG&E's utility operations. Table A provides a list of PG&E's utility assets that will be used to offer *Other Consulting Services*. In addition, it describes the underlying utility function of these assets. PG&E will provide *Other Consulting Services* using the expertise and equipment that already exist in PG&E. These services will only be offered using excess capacity of these assets that may become available from time to time.

Table A

Asset / Capacity	Utility function
Personnel	Utility personnel with expertise in but not limited to gas and electric system planning, engineering design, operations, maintenance, restoration, procurement, reliability, scheduling, system protection, asset strategy, risk and compliance.
Software applications	Various software applications used to analyze / monitor / model / operate / design / restore PG&E's gas and electric systems.
Hardware (e.g., servers, printers, phones, workstations)	Tools used to support the software applications and personnel to analyze / monitor / model / operate / design / restore PG&E's gas and electric systems.

2. The steps that will be taken by PG&E to ensure that a non-tariffed project will not affect the quality or cost utility operations:

Due to the limited scope and occurrences that non-tariffed *Other Consulting Services* will be available to be offered, it is not anticipated that the offering of such services will negatively affect the quality or cost of these services used to support PG&E's utility operations. In addition, PG&E has appropriate policies, procedures and systems in place to ensure that provision of *Other Consulting Services* does not adversely affect the cost, quality, or reliability of PG&E's utility service. These policies and procedures include, but are not limited to:

- Contractual arrangements that allow PG&E to terminate an *Other Consulting Services* project if it is determined that the personnel and/or resources are needed for utility operations in the immediate future.

- Review of present and future use of the *Other Consulting Services* personnel and/or resources to ensure that a potential non-tariff project will not constrain PG&E’s ability to provide and support utility planning, operations, and maintenance, restoration or procurement services to PG&E’s utility customers.
- Contractual arrangements that allow PG&E to divert any personnel and/or resources previously committed to an *Other Consulting Services* project to fulfill its utility obligations first.
- Contractual arrangements that indemnify and/or limit PG&E from any risk or liability from providing *Other Consulting Services* as non-tariffed.

3. Proof expanded NTP&S will not distort markets or be anticompetitive:

PG&E’s offering of *Other Consulting Services* complies with all applicable laws and regulations. In addition, it is consistent with the Commission’s policies regarding anti-competitive practices. PG&E’s provision of *Other Consulting Services* will not adversely impact competition in the relevant market due to the limited nature under which they will be offered. The relevant market for PG&E’s *Other Consulting Services* is providers of consulting services to utilities, power plant owners / operators, and related industries. This service offering will have negligible impact on the overall market for consulting services and will not have an anti-competitive effect on the market:

A. Competitive analysis of the relevant markets reveals that:

- There is high number of firms already offering these services.

Consulting services industry is specialized, mature and expanding. There are many large and small firms providing an assortment of services in this category, and competing in the market including engineering, management, and energy consulting firms. Based on an IBISWorld Industry report, increased investments into fixed capital construction projects have generated increased demand for these types of consulting services. Demand conditions for consulting services in these areas are forecasted to increase toward 2013³. Major consulting firms in this industry include Bechtel, Black & Veatch, Tetrattech and ABB. PG&E is not competing with other firms for market share in the consulting market but rather is only offering limited consulting related to its experience and expertise in engineering, design, and operational experience related to gas and electric distribution and transmission systems. Due to the number of participants in this market, the degree of specialization, and PG&E’s relatively small scope and scale of services, PG&E’s offering of *Other Consulting Services* does not adversely affect competitiveness of this market.

- It is easy for new companies to enter and exit the market.

³ IBISWorld Industry Report 54113 “Engineering Services in the US”, November 2010.

Consulting is based on an individual's or firm's industry knowledge and expertise. Many consulting firms specialize in gas and electric utility operations and barriers to entry for consulting services are low due to low capital requirements. Consulting is a dynamic business and new firms can enter or exit this industry with relative ease. Barriers to entry are related only to subject matter knowledge and marketing abilities. The possibility of new entrants into this market is high and PG&E's involvement in the market does not affect the decision-making of firms to enter or exit the market.

- Several substitutes for these services are available to customers.

There are several substitute firms available to customers for *Other Consulting Services*. Customers can choose to hire in-house experts and engineers. They may also choose to hire existing providers of these services from the marketplace's competitive pool.

B. PG&E's pricing for these services will not be anti-competitive.

PG&E's pricing practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not set prices for these services anti-competitively below cost or excessively above the competitive price.

Pricing for these services will be set at market value utilizing PG&E's fully loaded labor rates plus a margin. By their nature, consulting and technical service fees are typically a function of hours worked multiplied by an hourly rate. Typical rates for these services range from \$150 to \$300 per hour. The rates may be as high as \$500 per hour for some Senior-level consultants. PG&E will develop fees for these services in a manner similar to other energy consulting firms in the industry.

- PG&E will not collude with other companies to set prices for these services as this would be a direct violation of federal laws and regulations.

C. PG&E's contracting practices for these services will not be anti-competitive.

PG&E's contracting practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not tie unrelated products to these services and sell them as a bundle.

PG&E's *Other Consulting Services* will not be bundled with other unrelated services. These services will be offered on an as-needed basis and purchasers will not be required to buy other services.

- PG&E will not enter into unduly long term contracts for these services.
Contracts for consulting and technical services typically last for 6 months to 1 year depending on the size of the project. PG&E will work with customers to define a statement of work and expected timeframes. Customers for these services will decide the length of the contract depending on their needs. Customers may also terminate these agreements for cause or convenience.
- There will be no obligation to customers to purchase these services exclusively from PG&E.

PG&E's services will be offered to a variety of entities and will be provided through bi-lateral agreements. Customers have options in choosing suitable providers for their needs and will not be obligated to choose PG&E as their source for consulting services.

Attachment B

Operations Services for Other Utilities, Energy Service Providers, Municipalities and Others

Description of service

Operations services for other utilities, energy service providers, municipalities, and others (“*Operations Services*”) is a category that can include a wide variety of services including but are not limited to the following areas: materials management and procurement services, operations consulting and training services, billing and collections activities, line item billing, use of construction equipment and operators, meter reading, distribution system planning, maintenance and engineering, gas field services and sale of written company practices and procedures. *Operations Services* could be provided to utilities, municipalities, construction companies, industrial, and/or related industries that would have a need for PG&E’s expertise and/or functionality. Any offering of *Operations Services* would be contingent on the availability (underutilized or excess) of PG&E capacity in the area of interest from a potential non-tariffed customer. This expertise and functionality are necessary for the provision of utility service to PG&E’s customers. *Operations Services* will utilize the existing available (underutilized or excess) capacity of PG&E’s employees, computer software and equipment to provide these services.

An example of *Operations Services* could be if City A requested PG&E to purchase street light poles for them. These street light poles would be the same as a type that PG&E already purchases for its street light system and already has a material code assigned in PG&E’s procurement system. A PG&E Procurement Specialist would order the specified quantity and configuration for City A from PG&E’s approved vendor and would instruct the vendor to ship the street light poles directly to City A. PG&E would charge City A for the cost of the street light poles plus a percent of the materials cost as a procurement fee. This percent would be in line with industry standard practices and would at a minimum cover the incremental cost of the PG&E Procurement Specialist who worked with City A to specify and order the street light poles.

1. The underutilized or excess capacity used to provide the non-tariffed product and service:

Operations Services will make use of utility assets and capacity that were acquired for the purpose of and are necessary and useful in supporting PG&E’s utility operations. Table B provides a list of PG&E’s utility assets that will be used to offer *Operations Services*. In addition, it describes the underlying utility function of these assets. PG&E will provide *Operations Services* using the functionality and expertise that already exist in PG&E.

Table B

Asset / Capacity	Utility function
Personnel	Utility personnel with expertise in materials procurement, materials logistics, credit and collections, training, maintenance, engineering, gas field services, meter reading, customer care and billing.
Software applications	Various software applications used to support PG&E's materials procurement and logistics, credit and collections, field operations, PG&E personnel training and engineering, and customer care and billing.
Hardware (e.g., servers, printers, phones, workstations)	Tools used to create, maintain and operate PG&E's materials procurement, logistics, credit and collections, field operations, engineering, customer care and billing systems.

2. The steps that will be taken by PG&E to ensure that a non-tariffed project will not affect the quality or cost of the operations services used to support utility operations:

Due to the limited scope and occurrences that *Operations Services* will be offered as non-tariffed, it is not anticipated that the offering of such services will negatively affect the quality or cost of these services used to support PG&E's utility operations. In addition, PG&E has appropriate policies, procedures and systems in place to ensure that provision of *Operations Services* does not adversely affect the cost, quality, or reliability of utility service. These policies and procedures include, but are not limited to:

- Contractual arrangements that allow PG&E to terminate an *Operations Services* non-tariffed project if it is determined that the personnel and/or resources are needed for utility operations in the immediate future.
- Contractual arrangements that allow PG&E to divert any personnel and/or resources previously committed to an *Operations Services* non-tariffed project to fulfill its utility obligations first.
- Contractual arrangements that indemnify and/or limit PG&E from any risk or liability from providing *Operations Services* as non-tariffed.

3. Proof expanded NTP&S will not distort markets or be anticompetitive:

PG&E's offering of *Operations Services* complies with all applicable laws and regulations. In addition, it is consistent with the Commission's policies regarding anti-competitive practices. PG&E's provision of *Operations Services* will not adversely impact competition in the relevant market due to the limited nature under which they will be offered. The relevant market for this

category is operations services for other utilities, energy service providers, municipalities, and others with substantial utility infrastructures or services. This service offering will have negligible impact on the overall market for these types of services and will not have an anti-competitive effect on the market as described below in further detail:

A. Competitive analysis of the relevant markets reveals that:

- There is high number of firms already offering these services.

There are currently a large number of firms that provide procurement and billing services including e-procurement, on-line billing and other business-to-business and business-to-consumer transaction services. Many firms offer materials management and procurement services, using software platforms by Oracle, SAP, and Microsoft. Services are provided on-site, cloud based, hosted or as software. Gartner has identified 30 firms, including Ariba, Coupa, GEP, Perfect Commerce and Wax Digital, with a minimum of \$5 million in annual revenue generated from e-procurement alone.⁴ There are also many banks and bill service providers that offer collections and billing services. Major billing services providers in US include Alliance Data Systems, ALLTEL Information Services, Best Practice Systems, docSense, DST Output and Convergys. The market for operations services continues to expand as companies look to benefit from economies of scale, reduce operational costs and increase customer service. PG&E's offering of these *Operations Services* may provide potential cost savings to buyers and improved efficiency in the market.

- It is easy for new companies to enter and exit the market.

The internet significantly reduces the barriers to entry in business-to-business procurement and business-to-consumer services. The market for operations services and technology is rapidly changing as computing and communications technology change. Advanced metering infrastructure is expected to increase world-wide by 2 ½ times from 2011 to 2016, reaching 250 million units.⁵ As technology changes firms within this market will continue to compete vigorously in this rapidly evolving industry. There are no significant barriers to entry as capital requirements are not prohibitive and technological changes are rapidly reducing the cost to enter this market. Due to PG&E's limited ability to offer operations services, its involvement in the market will not materially alter the entry of new entrants or the market share of existing vendors.

- Several substitutes for these services are available to customers.

⁴ Gartner Research "E-Procurement Market and Vendor Landscape" September 2, 2011

⁵ ABIresearch "Energy Efficiency Mandates Drive Smart Meter Deployments above 100 Million in 2011" Press Release June 22, 2011

There are many direct substitutes for these operations services including a customer self-performing the services. However much of this is now out-sourced to vendors or exchanges are formed to share resources. There are many different ways in which the transactions can be executed. Collection services are substantially automated, and becoming more so as technology evolves.

B. PG&E's pricing for these services will not be anti-competitive:

PG&E's pricing practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not set prices for these services anti-competitively below cost or excessively above the competitive price.

PG&E will set the price for these services based on what the market of potential purchasers will pay. The typical pricing mechanisms within the industry for these services include price per transaction, per full-time equivalent, and per user per month. The most prevalent pricing mechanism is per user per month. PG&E will set prices for these services using industry benchmarks and fully loaded labor rates plus any IT costs and a margin. PG&E's pricing structure of these services will not affect the market for similarly situated services.

- PG&E will not collude with other companies to set prices for these services as this would be a direct violation of federal laws and regulations.

C. PG&E's contracting practices for these services will not be anti-competitive.

PG&E's contracting practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not tie unrelated products to these services and sell them as a bundle.

PG&E's *Operations Services* will not be bundled with other unrelated services. These services will be offered on an as-needed basis and purchasers will not be required to buy other services.

- There will be no obligation to customers to purchase these services exclusively from PG&E.

PG&E's services will be offered to a variety of entities and will be provided through bilateral agreements. Customers have options in choosing suitable providers for their needs and will not be obligated to choose PG&E as their source for *Operations Services*. PG&E customers will be free to accept or decline these services at any point during their offering.

- PG&E will not enter into unduly long term contracts for these services.

Contracts for *Operations Services* typically last for one to five years depending on the scope of the project. PG&E will work with customers to define a statement of work and expected timeframes. Customers for these services will decide the length of the contract depending on their needs. Customers may also terminate these agreements for cause or convenience.

Attachment C

Geographic Information Systems (GIS) Services

Description of service

Geographic Information System (GIS) is a computer-based tool for mapping and analyzing objects that exist and events that happen on Earth. This industry comprises of establishments primarily engaged in performing surveying and mapping services of the surface of the Earth. These services may include surveying and mapping of areas above or below the surface of the Earth, such as the creation of view easements or segregating rights in parcels of land by creating underground utility easements.⁶

PG&E's GIS group provides spatial data analysis, data management, map viewers and map making to support various utility functions such as planning, site suitability analysis and scenario modeling. GIS services are necessary for future planning, operations, and design of PG&E's utility system. PG&E's non-tariffed Geographic Information Systems Services ("*GIS Services*") category will involve using the existing capacity of PG&E's GIS employees, computer software and equipment to provide mapping services, map creation, specialized geographic data base analysis and development and user training to third parties.

An example of *GIS Services* is if City B requests PG&E to produce GIS coordinates based on a customized query of data defined by City B. Specifically, City B may request PG&E to provide its City Planners with the GIS coordinates of City B dwellings that are owner-occupied, located within one hundred feet of a city-owned street light and located within a two mile radius from City B's high school. PG&E would be able to provide this information using publicly available GIS data that PG&E has uploaded into its GIS (such as U.S. Census data and real estate sales from public records etc.) and GIS data PG&E has created for its own assets. PG&E would charge City B for this service based on the incremental hours spent by PG&E's GIS Data Analyst who worked on this project, multiplied by a market-based hourly rate which would at a minimum cover PG&E's standard costs for such personnel.

1. The underutilized or excess capacity used to provide the non-tariffed product and service:

GIS Services will make use of utility assets and capacity that were acquired for the purpose of and are necessary and useful in supporting PG&E's utility operations. Table C provides a list of PG&E's utility assets that will be used to offer *GIS Services*. In addition, it describes the underlying utility function of these assets. PG&E will provide *GIS Services* using the GIS data and expertise that already exist in PG&E.

⁶ US Census 2007 NAICS Definition: <http://www.census.gov/econ/industry/def/d541370.htm>

Table C

Asset / Capacity	Utility function
Personnel	Utility personnel with expertise in GIS such as GIS data analysts, mappers, programmers and application engineers.
GIS software and databases	Various GIS applications such as MapGuide map viewer, ArcGIS desktop software and Oracle spatial database that are currently used for utility purposes.
Hardware (e.g., servers, printers, phones, workstations)	Tools used to create, maintain, operate and display PG&E's GIS system.

2. The steps that will be taken by PG&E to ensure that a non-tariffed project will not affect the quality or cost of the GIS services used to support utility operations:

Due to the limited scope and occurrences that *GIS Services* will be offered as non-tariffed, it is not anticipated that the offering of such services will negatively affect the quality or cost of *GIS Services* used to support PG&E's utility operations. In addition, PG&E has appropriate policies, procedures and systems in place to ensure that provision of *GIS Services* does not adversely affect the cost, quality, or reliability of utility service. These policies and procedures include, but are not limited to:

- Contractual arrangements that allow PG&E to terminate a non-tariffed project if it is determined that the GIS personnel and/or resources are needed for utility operations in the immediate future
- Contractual arrangements that allow PG&E to divert any GIS personnel and/or resources previously committed to a non-tariffed project to fulfill its utility obligations first.
- Contractual arrangements that indemnify and/or limit PG&E from any risk or liability from providing *GIS Services* as non-tariffed.

3. Proof expanded NTP&S will not distort markets or be anticompetitive:

PG&E's offering of *GIS Services* complies with all applicable laws and regulations. GIS information related to gas and electric systems, that is public information and available to first responders and other interested individuals or organizations is not covered or limited by these services. In addition, it is consistent with the Commission's policies regarding anti-competitive practices. PG&E's provision of *GIS Services* will not adversely impact competition in the relevant market due to the limited nature under which they will be offered. The relevant market for PG&E's *GIS Services* is providers of GIS services to property developers, independent agencies and cities. This service offering will have negligible impact on the overall market for *GIS Services* and will not have an anti-competitive effect on the market as described below in further detail:

A. Competitive analysis of the relevant markets reveals that:

- There is high number of firms already offering these services.

In the 2007 Economic Census *GIS Services* are part of a larger category of Surveying and mapping services which are defined as U.S. industries comprising establishments primarily engaged in performing surveying and mapping services of the surface of the earth. The market for surveying and mapping services is large and highly competitive. Within this larger category, there are 9,860 establishments that provide these services nationally and 594 in California.⁷ The market for GIS Service providers is fairly diverse and a potential buyer can find many GIS Service providers who can offer similar services. PG&E's *GIS Services* are based on purchased information that is available to any commercial customer, public information that PG&E provides without charge and independently generated information that supports utility operations. PG&E's *GIS Services* offered would be limited to available capacity, resources, and expertise. Current firms that also offer *GIS Services* include Environmental Systems Research Institute (ESRI) who services 350,000 clients and has 2,800 employees, Intergraph Solutions, and General Electric (acquired Smallworld).

- It is easy for new companies to enter and exit the market.

Much GIS information is often found in the public domain as web-based geographic searches such as Google Maps, United States Geological Services, United States Census Bureau, and local cities and counties. Additionally, there are freeware versions of GIS software applications, web-based search tools, viewers and developer tools readily available. These free tools and services allow the development of expertise that can readily be converted into a commercially viable product or service.

- Several substitutes for these services are available to customers.

There are many substitutes for providing customers with the information contained in the end product of performing *GIS Services*. The end product is typically data depicted in a geographically accurate manner that can be queried in many different ways. The end product can be substituted with paper maps, electronic files of a map, and/or a spreadsheet with the data separated by data headings.

B. PG&E's pricing for these services will not be anti-competitive.

PG&E's pricing practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

⁷US Census 2007 Economic Survey: <http://www.census.gov/econ/industry/def/d541370.htm>

- PG&E will not set prices for these services anti-competitively below cost or excessively above the competitive price.

Pricing for these services will be set at market value utilizing PG&E's fully loaded labor rates plus a margin. In the GIS market, services are typically sold as a subscription. PG&E will develop fees for these services in a manner similar to other GIS firms and sell subscriptions or negotiate a fair and reasonable fee with customers that want a one-time data download based on the type of data requested.

- PG&E will not collude with other companies to set prices for these services as this would be a direct violation of federal laws and regulations.

C. PG&E's contracting practices for these services will not be anti-competitive.

PG&E's contracting practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not tie unrelated products to these services and sell them as a bundle.

PG&E's *GIS Services* will not be bundled with other unrelated services. These services will be offered on an as-needed basis and purchasers will not be required to buy other services.

- PG&E will not enter into unduly long term contracts for these services.

PG&E will work with customers to define a statement of work and expected timeframes. Customers for these services will decide the length of the contract depending on their needs. Customers may also terminate these agreements for cause or convenience.

- There will be no obligation to customers to purchase these services exclusively from PG&E.

PG&E's services will be offered to a variety of entities and will be provided through bi-lateral agreements. Customers have options in choosing suitable providers for their needs and will not be obligated to choose PG&E as their source for *GIS Services*.

Attachment D

Billing and Customer Communications Center Services

Description of service

Billing and Customer Communications Center Services (“*Billing and CCC Services*”) is a category that encompasses a wide variety of customer care services including but not limited to inbound customer requests, service establishments, transfers or turn-offs, complaints, inquiries, order entry/processing/fulfillment, online appointment scheduling, telephone answering/remote or virtual receptionist services, and outbound customer services. *Billing and CCC Services* also includes billing-related customer service functions such as bill calculation, bill consolidation/preparation, bill presentment and production, line item printing on a customer’s PG&E bill, bill processing and delivery, payment processing, and credit and collections. *Billing and CCC Services* could be provided to utilities or any companies that would have a need for PG&E’s expertise and/or functionality. Any offering of *Billing and CCC Services* would be contingent on the availability (underutilized or excess) of PG&E capacity in the area of interest from a potential non-tariffed customer. This expertise and functionality are necessary for the provision of utility service to PG&E’s customers. *Billing and CCC Services* will utilize the existing available (underutilized or excess) capacity of PG&E’s employees, computer software, hardware and equipment to provide the services listed above.

An example of *Billing and CCC Services* is the offering of IT help desk services for a business or municipality during non-peak hours by PG&E. PG&E has an internal IT service center called the Technology Service Center (TSC) operating 24/7 with a fully trained staff in desktop business applications, network administration functions, enterprise application support, and wireless device support for PG&E’s utility operations. Specifically, Company D who only conducts business during normal business hours but offers twenty-four hour support could request PG&E’s TSC representatives to answer Company D’s calls after normal business hours. The offering of such service to Company D would require the use of available and incremental capacity of existing PG&E TSC Representatives who work during the evening and night shifts. Company D would save the cost of providing after hour support for its employees and use PG&E’s TSC services instead. PG&E would charge Company D for this service based on the estimated incremental time spent by PG&E’s TSC Representatives responding to Company D customer calls along with a minimum monthly charge that would cover PG&E’s incremental cost to maintain the inbound telephone line and staff who are trained to handle Company D customer calls. This is in line with industry standard practices for companies who provide call center services. Companies typically charge a monthly price which can change based on the volume of calls received.

1. The underutilized or excess capacity used to provide the non-tariffed product and service:

Billing and CCC Services will make use of utility assets and capacity that were acquired for the purpose of and are necessary and useful in supporting PG&E’s utility operations. Table D

provides a list of PG&E’s utility assets that will be used to offer *Billing and CCC Services*. In addition, it describes the underlying utility function of these assets. PG&E will provide *Billing and CCC Services* using the functionality and expertise that already exist in PG&E.

Table D

Asset / Capacity	Utility function
Personnel	Utility personnel with expertise in customer service including help desk support, call centers and specialized customer needs, bill printing, bill processing, bill mailing, and payment processing.
Software applications	Various software applications used to support customer calls, inquiries and billing functions including but not limited to automated call distribution (ACD), interactive voice response (IVR), customer care and billing (CC&B), Workforce Management (WFM), Remedy Ticketing System and Timbuktu remote support applications. ACD is a specialized phone system used to route multiple simultaneous calls to appropriate teams. IVR is used to provide menus for call routing, provide prerecorded information, and complete interactive transactions integrated with customer databases. CC&B facilitates customer service functions including billing, payment information, credit information, and other core utility functions.
Hardware (e.g., servers, printers, phones, workstations)	Tools such as computers, phone lines, bill printers, inserters and sorters used by PG&E’s customer service personnel, billing personnel, and accounts payable personnel to support PG&E’s billing and customer communications functions.
PG&E Internet Domain page	PG&E’s internet domain page provides customers with self-service options such as on-line bill payment, service turn-on and appointment scheduling.

2. The steps that will be taken by PG&E to ensure that a non-tariffed project will not affect the quality or cost of utility operations:

PG&E has state-of-the-art technology, policies, and procedures in place to ensure high quality service at its help desk and call centers. Workforce management software is used to ensure that staffing levels are appropriate to meet anticipated call demand. When determining whether PG&E has capacity to perform a non-tariffed service in this category, PG&E would use all of its available workforce management tools, standards, and processes to make the determination. In addition, PG&E will have appropriate policies, procedures, and systems in place to ensure that provision of non-tariffed services for a third party did not adversely affect the cost, quality, or reliability of the services provided to PG&E’s utility customers.

These policies and procedures include but are not limited to:

- Contractual arrangements that allow PG&E to terminate a *Billing and CCC Services* non-tariffed project if it is determined that the personnel and/or resources are needed for utility operations in the immediate future.
- Contractual arrangements that allow PG&E to divert any personnel and/or resources previously committed to a *Billing and CCC Services* non-tariffed project to fulfill its utility obligations first.
- Contractual arrangements that indemnify and/or limit PG&E from any risk or liability from providing *Billing and CCC Services* as non-tariffed.
- Monitoring and review to ensure that *Billing and CCC Services* do not negatively impact service quality standards in PG&E's help desks and call centers.

3. Proof expanded NTP&S will not distort markets or be anticompetitive:

PG&E's offering of *Billing and CCC Services* complies with all applicable laws and regulations. In addition, it is consistent with the Commission's policies regarding anti-competitive practices. The relevant markets for these services are other billing services providers (BSPs) and Customer Contact Center Service providers such as Help Desk Services.

A. Competitiveness analysis of the relevant markets reveals that:

- There is high number of firms already offering these services.

A broad group of providers offer customer contact center, help desk and billing services. The leading companies in the contact center services industry include Teleperformance, Convergys, Sitel and IBM. Based on Gartner Research, the worldwide contact center services market is forecast to grow steadily through 2015. By that year, Gartner expects it will grow into a \$48.6 billion business, with a five-year compound annual growth rate (CAGR) of 5% from 2010 through 2015.⁸ Within North America, Gartner predicts that the help desk services market is expected to grow at a compound annual growth rate (CAGR) of 2.9%, from \$9,996 million in 2010 to \$11,197 million in 2014. Leading help desk service providers within United States include ACS, CSC, CompuCom, Dell and HP.⁹ On billing services provider side, Gartner predicts that revenue in North America will increase at a 4% CAGR to \$20.8 billion by 2015, confirming that the market opportunity for providers remains strong. Major billing services providers in US include Alliance Data Systems, ALLTEL Information Services, Best Practice Systems, docSense, DST Output and Convergys. Due to the large number of participants in these markets, the many market

⁸ Gartner Research "Magic Quadrant: Customer Management Contact Center BPO, Worldwide" 19 December 2011

⁹ Gartner Research "Market Trends: Help Desk and Desktop Outsourcing Competitive Metrics, North America" 1 June 2011

segments and PG&E's relatively small scope and scale of services, PG&E's offering of *Billing and CCC Services* does not adversely affect competition in this market.

- It is easy for new companies to enter and exit the market.

The market for *Billing and CCC Services* continues to expand as companies look to benefit from economies of scale, reduce operational costs and increase customer service. The increasing numbers of mobile devices, such as the iPhone, iPad, smart phones are creating demand for offering multiple options to customers for these services. Therefore, many companies look to outsource these capabilities rather than developing them in-house. Similarly, growth in non-voice channels such as IVRU, web and other self-service options will drive growth for these services. There are no significant barriers to entry as capital requirements are not prohibitive and technological changes are rapidly reducing the cost to enter this market.

- Several substitutes for these services are available to customers.

There are many substitute options available to customers for these services. A company may choose to build its own billing and customer communication services operation. Some of the services may be performed completely online through e-bills and interactive websites. Others looking for call center capabilities have many choices in terms of hours of operations, location, language capabilities quality and customization of services.

B. PG&E's pricing for these services will not be anti-competitive.

PG&E's pricing practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not set prices for these services anti-competitively below cost or excessively above the competitive price.

The typical pricing mechanisms within the industry for these services include price per minute, per call, per hour, per bill, per full-time equivalent, and per user per month. The most prevalent pricing mechanism is per user per month. PG&E will set prices for these services using industry benchmarks and fully loaded labor rates plus any IT costs and a margin.

- PG&E will not collude with other companies to set prices for these services as this would be a direct violation of federal laws and regulations.

C. PG&E’s contracting practices for these services will not be anti-competitive.

PG&E’s contracting practices will comply with all applicable laws and regulations and be consistent with the Commission’s policies regarding anti-competitive practices.

- PG&E will not tie unrelated products to these services and sell them as a bundle.

PG&E’s *Billing and CCC Services* will not be bundled with other unrelated services. These services will be offered on an as-needed basis and purchasers will not be required to buy other services.

- PG&E will not enter into unduly long term contracts for these services.

Contracts for *Billing and CCC Services* typically last 2 to 3 years and include renewal options. PG&E will work with customers to define a statement of work and expected timeframes. Customers for these services will decide the length of the contract depending on their needs. Customers may also terminate these agreements for cause or convenience.

- There will be no obligation to customers to purchase these services exclusively from PG&E.

PG&E will offer these services through bi-lateral agreements. Buyers of these services are free to purchase similar services from other providers. The entities that choose to utilize PG&E’s offering of these services have many choices in similarly situated providers and are not obligated to choose PG&E.

Attachment E

Energy Efficiency Engineering, Consulting and Technical Services

Description of service

Consulting and technical services and energy efficiency engineering, (*“Energy Efficiency Services”*) will be performed by PG&E engineers and other personnel with energy efficiency expertise using existing PG&E resources. These include energy efficiency testing equipment, training facilities, and hardware and software applications. Possible service offerings under this category include energy efficiency consulting, performing energy audits, facilities engineering, analysis and commissioning, lighting surveys, systems bid specifications, construction and observation and/or modeling building energy consumption simulations. PG&E will make these services available to facility owners, real estate management firms, engineering and consulting firms and business owners/operators who are interested in energy efficiency. These services will be limited in scope to areas where PG&E has related experience and test equipment.

PG&E will make *Energy Efficiency Services* available to customers on as-needed basis depending on availability of existing resources. Unlike traditional consulting services practices, PG&E’s agreements for these services will reserve the right to divert resources to fulfill utility obligations. Depending on the location of the customer, PG&E could provide these services over the phone or in-person at a PG&E location. Travel to customer site will be limited and only as needed. If training facilities, instrumentation and hardware and software applications are needed for these services, PG&E will use these assets only during time periods when they are not being used to perform utility functions. Similarly, the primary job of personnel involved with providing these services will be to perform utility related energy efficiency activities. Any time spent by these personnel on performing non-tariffed *Energy Efficiency Services* will be measured and accounted for separately. This tracking will allow PG&E to periodically review use of the energy efficiency personnel and/or resources to ensure that a potential non-tariffed project will not constrain PG&E’s ability to support or offer energy efficiency services to PG&E’s utility customers.

As an example, another utility like State Power could request PG&E to analyze their methods for developing a new energy efficiency related program that PG&E already has in place. PG&E would work with this utility to understand their needs, identify gaps and propose the most optimal method for this utility to develop energy efficiency related programs using some of our best practices. PG&E would charge State Power for this service based on the incremental hours spent by PG&E’s energy efficiency personnel who worked on this project multiplied by a market-based hourly rate which would at a minimum cover PG&E’s standard costs for such personnel.

1. The underutilized or excess capacity used to provide the non-tariffed product and service:

Energy Efficiency Services will make use of utility assets and capacity that were acquired for the purpose of and are necessary and useful in supporting PG&E’s utility operations. Table E provides a list of PG&E’s utility assets that will be used to offer *Energy Efficiency Services*. In addition, it describes the underlying utility function of these assets. PG&E will provide *Energy Efficiency Services* to third parties using the equipment and expertise that already exist in PG&E. These services will only use excess capacity that may become available from time to time of the assets described below.

Table E

Asset / Capacity	Utility function
Energy efficiency testing and training facilities	PG&E has energy efficiency testing and training facilities including the Advanced Technology Center and Pacific Energy Center. These facilities are used for performance testing and analysis of energy efficient technologies and to educate PG&E utility customers on available energy efficient technologies.
Various energy efficiency related instrumentation (E.g. loggers, meters and sensors)	This instrumentation is used to monitor and evaluate the energy efficiency of PG&E customer-owned equipment and/or facilities.
Hardware equipment (e.g., servers, printers, phones, workstations)	These tools are used to support the evaluation/analysis/monitoring of the energy efficiency of PG&E customer-owned equipment and/or facilities.
Energy efficiency software applications	Energy efficiency software applications are used to evaluate/analyze/monitor the energy efficiency of customer-owned equipment and/or facilities.
Personnel	These utility personnel perform energy efficiency related activities such as energy audits, energy consumption modeling, and/or testing, analysis and monitoring of customer-owned equipment or facilities to determine their energy efficiency.

2. The steps that will be taken by PG&E to ensure that the project will not affect the quality or cost of the utility service:

Due to the limited scope and occurrences that non-tariffed *Energy Efficiency Services* will be offered, it is anticipated that the offering of such services will not negatively affect the quality or cost of the energy efficiency engineering consulting, and technical services offered to or in support of PG&E’s utility customers. In addition, PG&E has appropriate policies, procedures and systems in place to ensure that provision of these services to third parties does not adversely affect the cost, quality, or reliability of utility service.

These policies and procedures include, but are not limited to:

- Contractual arrangements that allow PG&E to terminate a non-tariffed project if it is determined that the energy efficiency personnel and/or resources are needed to support utility operations in the immediate future.
- Review of present and future use of the energy efficiency personnel and/or resources to ensure that a potential non-tariffed project will not constrain PG&E's ability to support or offer energy efficiency services to PG&E's utility customers.
- Contractual arrangements that allow PG&E to divert any energy efficiency personnel and/or resources previously committed to a non-tariffed project to fulfill its utility obligations first.
- Contractual arrangements that indemnify and/or limit PG&E from any risk or liability from providing these *Energy Efficiency Services*.

3. Proof expanded NTP&S will not distort markets or be anticompetitive:

PG&E's offering of *Energy Efficiency Services* complies with all applicable laws and regulations. In addition, it is consistent with the Commission's policies regarding anti-competitive practices. The relevant markets for PG&E's *Energy Efficiency Services* are energy efficiency engineering, consulting and testing services. PG&E's offering of this service does not adversely impact competition in the relevant markets.

A. Competitiveness analysis of the relevant markets reveals that:

- There is high number of firms already offering these services.

The market for energy efficiency engineering, design and testing services is very large, has diverse segments, is highly competitive and is rapidly expanding. In a 2010 study, it was estimated that nationally \$18 billion were expended in the Energy Efficiency Services Sector (EESS) for Planning and Project Management, Consulting and Auditing, Installation and Evaluation, Monitoring and Verification services; with high projected growth to \$80 Billion by 2020. There are many large and small firms competing in the market including architecture and engineering (A&E) firms, energy service companies (ESCOs), implementation contractors and specialized energy management firms. Due to the large number of participants in this market, the many market segments and PG&E's relatively small scope and scale of services, PG&E's offering of *Energy Efficiency Services* does not adversely affect competition in this market.

- It is easy for new companies to enter and exit the market.

Energy efficiency is a growing and attractive market and the barriers to entry are minimal. Firms only require engineering and/or consulting skills and need little capital for office and analytical equipment. It is expected that employment in the Energy Efficiency Service

Sector (EESS) will grow from 380,000 individuals in 2008 to 1,300,000 individuals in 2020. The growth rate and number of new entrants into this market is high and PG&E's involvement in the market does not change this trend or stifle market participation.

- Several substitutes for these services are available to customers.

Many substitute options are available to customers for *Energy Efficiency Services*. Customers can choose to hire in-house experts and engineers, or they may also choose to hire existing providers of these services that most closely match their needs, anywhere from a multi-national ESCO to a local contractor. Due to large number of providers, firms in this market are very competitive at all levels of the market, and customers have extensive choices. PG&E will just be another provider among many options available to customers.

B. PG&E's pricing for these services will not anti-competitive.

PG&E's pricing practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not set prices for these services anti-competitively below cost or excessively above the competitive price.

Pricing for these services will be set at market value utilizing PG&E's fully loaded labor rates plus a margin. By their nature, consulting and technical service fees are typically a function of hours worked multiplied by an hourly rate. Typical rates for these services range from \$150 to \$300 per hour. The rates may be as high as \$500 per hour for some Senior-level consultants. PG&E will develop fees for these services in a manner similar to other energy consulting firms in the industry.

- PG&E will not collude with other companies to set prices for these services as this would be a direct violation of federal laws and regulations.

C. PG&E's contracting practices for these services will not be anti-competitive.

PG&E's contracting practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not tie unrelated products to these services and sell them as a bundle.

PG&E's *Energy Efficiency Services* will not be bundled with other unrelated services. These services will be offered on an as-needed basis and purchasers will not be required to buy other services.

- PG&E will not enter into unduly long term contracts for these services.

Contracts for *Energy Efficiency Services* typically last for 6 months to two years depending on the size of the project. PG&E will work with customers to define a statement of work and expected timeframes. Customers for these services will decide the length of the contract depending on their needs. Customers may also terminate these agreements for cause or convenience.

- There will be no obligation to customers to purchase these services exclusively from PG&E.

PG&E's services will be offered to a variety of entities and will be provided through bi-lateral agreements. Customers have options in choosing suitable providers for their needs and will not be obligated to choose PG&E as their source for consulting services.

Attachment F

Use of Utility Software

Description of service

PG&E develops and uses various software applications for all aspects of its utility operations including but not limited to the design, operation, maintenance, reliability, protection, and restoration of its gas and electric systems; procurement, scheduling, and monitoring transportation of wholesale gas and electricity; interactions with PG&E utility customers; and back office functions like managing real estate, vehicles, other physical assets, human resources, and vendor contracts. These software applications are either developed solely by PG&E or jointly with a vendor(s). Some examples of software applications PG&E currently uses for utility purposes are load forecasting models, outage management software and fleet management software.

Use of Utility Software will mean licensing of software applications that are developed or owned by PG&E to conduct its utility operations. PG&E will only license software that it has sufficient rights to do so and that can be easily replicated and shared with potential licensees without affecting PG&E's own use of the software. PG&E's intent is not to become a large scale software services provider such as Microsoft or SAP. Instead, PG&E will grant license rights to existing and new technology companies and utilities who express an interest in licensing PG&E's software.

As an example, a software company such as ABC Software may ask to license rights from PG&E to an outage management application that PG&E paid ABC Software to develop for PG&E's utility use. PG&E may negotiate appropriate license terms and grant a license to ABC Software. ABC Software, the licensee in this example, will be responsible for developing a market ready solution and performing activities related to the sale, installation and maintenance of the software at its customer's sites. PG&E's role will be to provide license rights and if needed, some limited training on how PG&E uses the outage management application.

1. The underutilized or excess capacity used to provide the non-tariffed product and service:

Use of Utility Software will use utility assets and capacity that were acquired for the purpose of and are necessary and useful in supporting PG&E's utility operations. Table F provides a list of the utility assets and capacity to be used for *Use of Utility Software*. In addition, it describes the underlying utility purposes of these assets. PG&E will license *Utility Software* to third parties using the assets and expertise that already exist in PG&E

Table F

Asset / Capacity	Utility function
PG&E Internet Domain page	PG&E's internet domain page hosts software applications to provide customers web-based services such as on-line bill payment and energy management.
Personnel	Utility personnel necessary to design, develop, maintain and operate various PG&E owned software applications.
Intellectual Property	Proprietary knowledge, procedures, documents or ideas owned and used by PG&E to build processes, business rules, and/or software applications.
Software Applications and Related Licenses	Various software applications developed by or funded and owned by PG&E.
Hardware (e.g., servers, printers, phones, workstations)	Tools used to create, maintain, display and operate PG&E's software applications.

2. The steps that will be taken by PG&E to ensure that the project will not affect the quality or cost of the utility service:

Software applications and the associated computer programs and business rules can be replicated and licensed without any impact on the quality or cost of the software applications used to support PG&E's utility customers and its gas and electric systems. In addition, PG&E has appropriate policies, procedures and systems in place to ensure that *Use of Utility Software* to third parties does not adversely affect the cost, quality, or reliability of the software applications used to support PG&E's utility customers and its gas and electric systems. These policies and procedures include, but are not limited to:

- Contractual agreements that include confidentiality provisions to protect PG&E's intellectual property.
- Contractual agreements that allow PG&E to continue using the licensed software for its utility operations without any limitation from the licensee.
- Contractual arrangements that allow PG&E to terminate a *Use of Utility Software* project if it is determined that the personnel and/or resources are needed to support utility operations in the immediate future
- Review of present and future use of the personnel and/or resources used to develop and operate utility software applications to ensure that a potential *Use of Utility Software* project will not constrain PG&E's ability to support PG&E's utility customers and its gas and electric systems.
- Contractual arrangements that allow PG&E to divert any personnel and/or resources previously committed to a *Use of Utility Software* project to fulfill its utility obligations first.
- Contractual arrangements that indemnify and/or limit PG&E from any risk or liability from *Use of Utility Software*.

3. Proof expanded NTP&S will not distort markets or be anticompetitive:

PG&E's *Use of Utility Software* complies with all applicable laws and regulations. In addition, it is consistent with the Commission's policies regarding anti-competitive practices, since PG&E's provision of this service does not adversely impact competition in the relevant market. The relevant market for PG&E's *Use of Utility Software* is establishments involved in producing and distributing computer software. This includes design, documentation, installation and support services.

A. Competitiveness analysis of the relevant markets reveals that:

- There is high number of firms already offering these services.

The software industry is very competitive and growing with a large number of providers who may bundle a software application with hardware and/or implementation and maintenance services. According to the bureau of labor statistics, there were 10,400 software companies with 263,700 wage and salary jobs in 2008. Wage and salary jobs in software industry are expected to increase by 30 percent between 2008 and 2018, almost 3 times as fast as the 11 percent growth projected for all industries combined.¹⁰ The growth in demand for software services is a result of increased investment in applications and software systems by companies to increase efficiency.

Additionally, the application service provider market is also a very competitive marketplace that offers computer-based services to customers over a network. Through application service providers, the complexities and costs of software can be cut down. As of 2003, estimates of the size of the ASP market in the United States range from \$1.5 to \$4 billion dollars. PG&E would only be licensing software it has developed itself or paid a vendor to develop on its behalf and those software applications would be related to the ongoing design, operations, and maintenance of its utility assets. Therefore, PG&E's licensing of utility software is not anticipated to have an impact on the software industry.

- It is easy for new companies to enter and exit the market.

The software industry is dynamic with new technological innovations occurring rapidly. Many software applications that are now developed are intended for use on the internet or mobile devices. This has made it really easy for new software companies to enter the market. The growing use of internet and mobile devices will be a driver of growth in the software industry. Although the software industry has many large and small firms, many companies are startups hoping to capitalize on a market niche. Since very little to no capital is required to develop new software, there is a constant influx of new entrants into the software market.

¹⁰ U.S. Bureau of labor statistics, "Career Guide to Industries: Software Publishers" 2010 – 2011 edition

- Several substitutes for these services are available to customers.

Due to the high number of suppliers, many substitutes are available for software applications. Since software is easy to replicate, many different providers offer similar software services and differentiate themselves based on quality of services. The application service provider (ASP) model also makes it easy to switch from one provider to another.

B. PG&E's pricing for these services will not anti-competitive.

PG&E's pricing practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not set prices for *Use of Utility Software* anti-competitively below cost or excessively above the competitive price.

Pricing for *Use of Utility Software* will be set at market value utilizing benchmarks on typical royalty rates for the type of software. Royalty rates for software typically range between 5% and 20% of licensee's revenues. PG&E's royalty rates for *Use of Utility Software* will be reflective of typical rates in the industry and will be based on what the licensees are willing to pay. The software market is a truly competitive market with no individual firm capable of influencing prices.

- PG&E will not collude with other companies to set prices for *Use of Utility Software* as this would be a direct violation of federal laws and regulations.

C. PG&E's contracting practices for these services will not be anti-competitive.

PG&E's contracting practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not tie unrelated software and/or services and sell them as a bundle.

PG&E's *Use of Utility Software* will not be bundled with other unrelated services. Software licenses will be granted to interested licensees without any obligation to buy other services from PG&E.

- PG&E will not enter into unduly long term contracts for these services.

Since most software has a short life, contracts for software licensing typically last for 3 to 5 years depending on type of the software. Licensees will decide the length of the contract depending on their needs.

- There will be no obligation to customers to purchase these services exclusively from PG&E.

PG&E's *Use of Utility Software* will be offered to a variety of entities and will be provided through bi-lateral agreements. Licensees of PG&E's software will be free to purchase other solutions in similar offerings from other providers or build the software in-house. PG&E's *Use of Utility Software* is an additional solution in the market and it is optional for licensees to enter into an agreement with PG&E.

Attachment G

Use of Utility Held Patents

Description of service

A PG&E patent is an exclusive right granted to PG&E by the United States Patent and Trademark Office (“USPTO”) for a new, useful, and non-obvious process, machine, article of manufacture, or any new and useful improvement thereof, and claims that are documented in a formal patent application submitted by PG&E and accepted by the USPTO. PG&E’s patents protect its proprietary processes, procedures, methods and equipment from unauthorized use. PG&E develops patent applications for new, useful, and non-obvious processes, machines, article of manufacture, or any new and useful improvements thereof as it relates to serving PG&E’s utility customers and designing, operating, maintaining, and restoring its gas and electric systems. One example of a PG&E patent is an article of manufacture for cleaning sub-surface electrical enclosures. *Use of Utility Held Patents* will mean licensing a PG&E patent(s) to an interested party(s) so they may offer products and/or services based partly or solely upon the PG&E patented technology, process or procedure.

An example of *Use of Utility Held Patents* is if another utility, State Power, is interested in learning about PG&E’s patented methodology for cleaning sub-surface electric enclosures and wants to use it in its own operations. PG&E will enter into a patent license agreement granting State Power the right to use PG&E’s patented process. If needed, PG&E may provide limited training to State Power on how PG&E uses the patented methodology. PG&E’s *Use of Utility Held Patents* will encourage sharing best practices and methodologies with other gas and electric utilities. Similarly, if PG&E’s patent is for software or hardware technology, PG&E will license it to an interested technology company who will develop a market ready solution using PG&E’s patent. The licensee in this example will carry on activities related to sale, installation and maintenance of the hardware or software at its customer’s sites. PG&E’s role will simply be to provide license rights and if needed, some limited training on how PG&E uses the patented technology.

1. The underutilized or excess capacity used to provide the non-tariffed product and service:

Use of Utility Held Patents will use utility assets and capacity that were acquired for the purpose of and are necessary and useful in supporting PG&E’s utility operations. Table G provides a list of the utility assets and capacity to be used for *Use of Utility Held Patents* projects. In addition, it describes the underlying utility purposes of these assets. PG&E will license *Utility Held Patents* to third parties using the assets and expertise that already exist in PG&E

Table G

Asset / Capacity	Utility function
Personnel	Utility personnel necessary to develop, maintain and enforce PG&E's patents.
Intellectual Property	Proprietary processes, procedures, business rules, and/or ideas that are described in PG&E's patent application claims.
Patents	Patents owned by PG&E to protect its proprietary processes, procedures, or equipment from unauthorized use.

2. The steps that will be taken by PG&E to ensure that the project will not affect the quality or cost of the utility service:

Use of Utility Held Patents will not have an impact on the quality or cost of the utility service offered by PG&E to its utility customers. This will be achieved by including language in the licensing agreement that PG&E will have the right to continue to use the patented technology, processes, business rules, etc. for its utility operations without any limitation by the licensee. In addition, PG&E has appropriate policies, procedures and systems in place to ensure that licensing of *Utility Held Patents* to third parties does not adversely affect the cost, quality, or reliability of the utility service offered by PG&E to its utility customers. These policies and procedures include, but are not limited to:

- Contractual arrangements that allow PG&E to terminate a *Use of Utility Held Patents* project if it is determined that the personnel and/or resources are needed to support utility operations in the immediate future
- Review of present and future use of the personnel and/or resources used to develop and operate PG&E patented technology, business rules, processes, and/or procedures to ensure that a potential *Use of Utility Held Patents* project will not constrain PG&E's ability to support PG&E's utility customers and its gas and electric systems.
- Contractual arrangements that allow PG&E to divert any personnel and/or resources previously committed to a *Use of Utility Held Patents* project to fulfill its utility obligations first.
- Contractual arrangements that indemnify and/or limit PG&E from any risk or liability from *Use of Utility Held Patents*.

3. Proof expanded NTP&S will not distort markets or be anticompetitive:

PG&E's *Use of Utility Held Patents* complies with all applicable laws and regulations. In addition, it is consistent with the Commission's policies regarding anti-competitive practices. The relevant market for PG&E's licensing of utility held patents is technology companies developing new methodologies, hardware or software related to the gas and electric industry.

A. Competitiveness analysis of the relevant markets reveals that:

- There is high number of firms already offering these services.

Firms file for patent protection in most all industries for different types of intellectual property. All types of businesses are constantly striving to develop new technologies, processes, or procedures to become more efficient or develop a competitive edge. According to patent statistics published by the United States Patent and Trademark Office (USPTO), in 2010 there were 241,977 applications and 107,792 grants of new patents in US. Of the 107,792 grants, 27,337 were in California which is considerably higher than all other states. Among the companies filing the highest number of patents are IBM, Samsung, Microsoft, Canon and Panasonic. IBM alone filed 5866 patents in 2010. PG&E's portfolio of utility held patents consists of less than 10 patents currently. PG&E's licensable patents were and will be developed by PG&E for its purposes. Therefore, PG&E's involvement in the market will be extremely limited and not adversely impact the large number of firms that already exist in the market.

- It is easy for new companies to enter and exit the market.

The market for patents is constantly growing. There are no barriers to entry in designing or creating a new patentable technology, process or procedure. The cost to file a patent is minimal and mainly consists of legal fees. The basic filing fee for a utility patent is \$380. For small entities, the electronic filing fee is as low as \$95. Therefore, it is easy for new companies to develop and obtain patents. Many start-ups own some form of a patented process or technology.

- Several substitutes for these services are available to customers.

By definition (because of the patent) there are not direct substitutes for the patented item. However, there may be numerous substitutes that are similar enough to be an attractive substitute.

B. PG&E's pricing for these services will not anti-competitive.

PG&E's pricing practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not set prices for *Use of Utility Held Patents* anti-competitively below cost or excessively above the competitive price.

Pricing for patent licenses will be set at market value utilizing benchmarks on typical royalty rates for the type of patent. Royalty rates for patents typically range between 5% and 20% of licensee's revenues. PG&E's royalty rates for *Use of Utility Held*

Patents will be reflective of typical rates in the industry and will be based on what the licensees are willing to pay.

- PG&E will not collude with other companies to set prices for *Use of Utility Held Patents* as this would be a direct violation of federal laws and regulations.

C. PG&E's contracting practices for these services will not be anti-competitive.

PG&E's contracting practices will comply with all applicable laws and regulations and be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not tie unrelated products and/or services and sell them as a bundle.

PG&E's *Use of Utility Held Patents* will not be bundled with other unrelated services. Patent licenses will be granted to interested licensees without any obligation to buy other services from PG&E.

- PG&E will not enter into unduly long term contracts for these services.

The USPTO governs useful life of a patent. Under current US law, the term of patent is 20 years from the earliest claimed filing date. For applications filed before June 8, 1995, the term is 17 years from the issue date or 20 years from the earliest claimed domestic priority date, the longer term applying. The length of PG&E's patent licenses will terminate on or before the expiration date of the patent.

- There will be no obligation to customers to purchase these services exclusively from PG&E.

PG&E's *Use of Utility Held Patents* will be offered to a variety of entities and will be provided through bi-lateral agreements. It will be optional for licensees to enter into an agreement with PG&E.

Attachment H

Use of Communications and Computing Systems

Description of service

PG&E owns and operates an extensive telecommunications networks used to support its utility operations. The network carries voice and data traffic that is transmitted and received over fiber optic cable, radio, and microwave dish networks. PG&E data is stored typically on servers owned and maintained by PG&E in secure data centers that are owned by PG&E or accessible only by qualified PG&E personnel. PG&E has a group of IT personnel who design, install, maintain, and support these networks. *Use of Communications and Computing Systems* will entail PG&E providing a variety of communications and computing related services including but not limited to network capacity such as circuits, wave lengths, radio spectrum, dark fiber, telecommunications towers, communications cable, data center, or network server capacity, marketing of third parties' right of ways and installation, maintenance, and support of communications and computing network equipment.

PG&E's intent is not to become a telecommunications provider or a computing system provider like Oracle, Verizon, or Comcast to name a few. Instead PG&E will make available to customers like Oracle, Verizon, or Comcast, the use of PG&E's communications or computing systems on an as-needed basis only if it is determined there is available, spare capacity in PG&E's systems. Therefore, PG&E anticipates providing access to these systems only on a limited basis. Unlike traditional telecommunications providers or computing system providers, PG&E's agreements for use of these systems will reserve the right to terminate use of the Systems to fulfill PG&E's utility obligations. Therefore, offering *Use of Communications and Computing Systems* should not negatively impact the cost or quality of PG&E's utility service.

An example of *Use of Communications and Computing Systems* is if an internet service provider, ABC requested use of excess capacity in one of PG&E's data centers. Specifically, ABC could request use of spare server capacity in PG&E's East Bay data center to host content owned and maintained by ABC. PG&E's IT personnel could partition the server so that ABC only has access to a specific portion and capacity of a PG&E server which would be physically located in PG&E's data center and maintained by PG&E IT personnel. PG&E would charge ABC a monthly charge that would cover PG&E's incremental cost to maintain the server capacity and to respond to outages. The monthly charge would be in line with industry standard practices for companies who provide a similar type of service.

1. The underutilized or excess capacity used to provide the non-tariffed product and service:

Use of Communications and Computing Systems will make use of PG&E assets and capacity that were acquired for the purpose of and are necessary and useful in supporting PG&E's utility operations. Table H below provides a list of PG&E's assets that will be used to offer services under this category. Additionally, the table includes a description of the underlying utility

function of these assets. PG&E will allow *Use of Communications and Computing Systems* to third parties using the equipment and expertise that already exist in PG&E. These services will only use excess capacity that may be available from time to time.

Table H

Asset / Capacity	Utility function
Personnel	Utility personnel including but not limited to Network Architects, Telecommunications Technicians, and/or Data Center Technicians.
Physical assets associated with PG&E's telecommunications and data networks	Various assets including but not limited to fiber optic cable, telecommunications towers, servers, microwave dishes, data centers, data collection units, and frequency ranges.

2. The steps that will be taken by PG&E to ensure that a non-tariffed project will not affect the quality or cost of PG&E utility services:

Due to the limited scope and occurrences that *Use of Communications and Computing Systems* will be offered, it is anticipated that the offering of such services will not negatively affect the quality or cost of PG&E's utility operations. In addition, PG&E has appropriate policies, procedures and systems in place to ensure that *Use of Communications and Computing Systems* does not adversely affect the cost, quality, or reliability of PG&E's utility operations. These policies and procedures include, but are not limited to:

- Contractual arrangements that allow PG&E to terminate a non-tariffed project if it is determined that the personnel and/or resources are needed for utility operations in the immediate future
- Contractual arrangements that allow PG&E to divert any personnel and/or resources previously committed to a non-tariffed project to fulfill its utility obligations first.
- Contractual arrangements that indemnify and/or limit PG&E from any risk or liability from offering *Use of Communications and Computing Systems*.

3. Proof expanded NTP&S will not distort markets or be anti-competitive:

PG&E's offering the *Use of Communications and Computing Systems* complies with all applicable laws and regulations. In addition, it is consistent with the Commission's policies regarding anti-competitive practices. The relevant markets for PG&E's offering the *Use of Communications and Computing System* are telecommunications providers who offer voice, data, transport, network capacity, and data hosting services. PG&E's offering the *Use of Communications and Computing Systems* will not adversely impact competition in the relevant markets.

A. Competitiveness analysis of the relevant markets reveal that:

- There is high number of firms already providing these services.

These providers range from incumbent local exchange carriers such as AT&T and Verizon to Competitive Local Exchange Carriers such as Level 3 Communications, TW Telecom, Earthlink, AboveNet, WaveBroadband, TelePacific, Zayo, and Paetec Communications to name just a few. These providers can offer extremely robust network capacity and coverage within PG&E's service territory. Additionally, there are many firms that offer data hosting services. Due to the large number of participants in this market and PG&E's relatively small footprint and scope, PG&E's offering the *Use of Communications and Computing Systems* will not adversely affect competition in this market.

- It is easy for new companies to enter and exit the market.

There are many large providers and small regional providers competing in this market. It is easy for new companies to enter the market by either signing agreements with existing providers or obtaining their own infrastructure. Data center hosting services are moving to a virtualized environment. A boom in the emergence of cloud computing has increasing influence on the competitive landscape of hosting market.

- Several substitutes for these services are available to customers.

Many substitute options are available to customers for *Use of Communications and Computing Systems*. Customers can choose to build their own infrastructure, or purchase services from the 134 competitive local exchange carriers that are operating in California. In addition, services can be purchased from the incumbent local exchange carriers operating in California like AT&T and Verizon. Due to the large number of providers, companies compete highly for customers in this market. PG&E will just be another provider among many options available to customers.

B. PG&E's pricing for these services will not be anti-competitive.

PG&E's pricing practices will comply with all applicable laws and regulations and will be consistent with the Commission's policies regarding anti-competitive practices.

- PG&E will not set prices for these services anti-competitively below cost or excessively above the competitive price.

Pricing for these services will be set at market value. Due to the large number of providers in this market, PG&E's pricing will be in line with what customers will be willing to pay (what the market will bear) and will also cover PG&E's fully loaded labor rates plus a margin, where applicable. Typical rates for these services range

from \$100-\$200 per hour. PG&E will develop any applicable hourly fees in a manner similar to other communications services providers in the industry.

- PG&E will not collude with other companies to set prices for these services as this would be a direct violation of federal laws and regulations.

C. PG&E’s contracting practices for these services will not be anti-competitive.

PG&E’s contracting practices will comply with all applicable laws and regulations and be consistent with the Commission’s policies regarding anti-competitive practices.

- PG&E will not tie unrelated products to these services and sell them as a bundle.

PG&E’s offering of *Use of Communications and Computing Systems* will not be bundled with other unrelated services. These services will be offered on an as-needed basis and purchasers will not be required to buy other services.

- PG&E will not enter into unduly long term contracts for these services.

Contracts for *Use of Communications and Computing Systems* typically last for 1 year to 5 years. PG&E will work with customers to define a statement of work and expected timeframes. Customers for these services will decide the length of the contract depending on their needs. Customers may also terminate these agreements for cause or convenience.

- There will be no obligation to customers to purchase these services exclusively from PG&E.

PG&E’s services will be offered to a variety of entities and will be provided through bi-lateral agreements. Customers have options in choosing suitable providers for their needs and will not be obligated to choose PG&E as their source for *Use of Communications and Computing Systems*.