Economic Development

Executive Summary

Chelan County PUD has been a catalyst for economic development in Chelan County since its formation after a vote of the people in 1936. Originally, the economic development it spurred was a result of low cost, reliable power generation when Chelan PUD secured financing to build new turbines at Rock island Dam to supply Alcoa. Affordable electric power is not the only positive economic impact to Chelan County. Under the federal licenses for our hydropower projects, Chelan PUD developed a beautiful park that sparks an estimated $2.4 million annually in economic activity. These parks not only benefit local residents, but they attract visitors and sports teams who spend dollars locally. The people of Chelan County also benefit from high-speed fiber, water and wastewater systems, energy conservation programs and incentives, and high quality local jobs. Chelan PUD also brings indirect benefits to the county through the large investments we make in our facilities and infrastructure, which provides local tax dollars and attracts workers to local businesses.

If Chelan PUD achieves its expected financial scenario, over the next strategic planning horizon there is an opportunity for the utility to update and define its future role in supporting economic development. As part of Chelan PUD's Strategic Planning process for 2015 and beyond, an Economic Development Topic Team (EDTT) evaluated over 100 ideas generated by the public and the EDTT itself. Over the course of three months and five meetings, the EDTT narrowed the list to five ideas that can best position Chelan PUD to be a catalyst for Economic Development. The ideas support the direction the EDTT was given under the Strategic Planning process to select planning goal to "do the best, for the most, for the longest". The "Top-5" ideas fit into three overarching themes, as illustrated below.

Table 1, Economic Development Team "Top-5 Ideas" At a Glance

Themes	Top-5 Ideas
Leverage Chelan PUD surplus power to attract industries and jobs.	Develop "Allocating Power for Jobs" Evaluation Tool. Develop a consistent evaluation tool that accounts for the costs and benefits of attracting new industries to Chelan County in order to determine, on a case-by-case basis, how best to leverage Chelan PUD's surplus power. Develop a cap on the amount of power available. Estimated cost for developing the evaluation tool and model: less than $100,000. However, an allocation of a 20 megawatt block of power is estimated to be worth approximately $8.7 million on the wholesale power market annually.
Use Chelan PUD's position in the community and utility industry to support mentoring and education opportunities. The goal is to provide local students with opportunities to learn about interesting and well paying jobs and to keep and attract local talent.	Mentoring program for high school grade levels. Support a high school job shadow/mentoring program to educate students on the types of jobs and careers Chelan PUD offers. Estimated cost: $500,000 and $750,000.
	Create higher-education curriculum (technical and professional). Team with other utilities or institutions to develop a curriculum that helps local students or those seeking a career shift to prepare for high-demand utility jobs. Estimated cost: $950,000 over 10 years.

Participate more directly in economic development activities through collaboration with local businesses and organizations. Proactively seeking out research and development opportunities that would benefit local businesses and the County.	Designate a Chelan PUD Economic Development Team. Create a Chelan PUD team dedicated to partnering with economic development agencies and businesses to facilitate collaboration on economic development projects within our statutory authority. Estimate cost: between $500,000 and $750,000.
	Support research and development opportunities. Actively seek research and development opportunities that align with Chelan PUD's operations and can be deployed within the county. Estimated cost: $2 million over 10 years.

The Economic Development Topic Team – Charter and Special Considerations

The Economic Development Topic Team (EDTT) was chartered with considering two questions: "How can Chelan PUD continue to support and act as a catalyst for economic development in Chelan County?" and "Can it fill this roll differently then how it has in the past?" The State of Washington has given some entities, such as Port Districts, the explicit authority to pursue economic development activities. With this in mind, the EDTT specifically considered areas where Chelan PUD support would be a catalyst for economic development through participation in activities led by others.

By statute, Washington Public Utility Districts (PUDs) are prohibited from investing in activities the primary purpose of which is to create and enhance economic development. However, Chelan PUD has been a driver of economic development in the County since its formation in 1936 as a side effect of our mission as a utility provider. Through a combination of wholesale power sales and local non-profit operation of the electricity and distribution system, Chelan PUD delivers some of the lowest power rates in the world. Chelan PUD's low rates theoretically save retail electric customers approximately $63 million when compared to the state average. Dollars not spent on electric rates are freed up to be spent in other areas of our local economy.

Evaluating ideas around how to use "public power benefits" for "economic development" was challenging for the EDTT because concepts often revolved around themes, not specific near-term actions. A major theme was how to utilize Chelan PUD's surplus hydropower generation to recruit companies to Chelan County. In order to effectively leverage Chelan PUD's surplus power to attract jobs, the EDTT identified factors to consider, such as the amount of power requested, the number and types of jobs likely to be created, potential tax revenue, and infrastructure requirements. The EDTT recognized that each company would offer a unique set of potential costs and benefits – or trade-offs - in terms of energy demand and local job creation. So instead of recommending recruitment activities for a particular industry, the EDTT determined it is most important to develop a *means by which* to evaluate an individual business that expresses an interest in locating in the County. The EDTT coalesced around the idea that an Evaluation Tool is needed to take into account each circumstance's unique costs and benefits.

EDTT Evaluation Process

The EDTT held six meetings over the course of three months and evaluated over 100 ideas from the public and the EDTT itself. To manage the volume of input, the EDTT created overarching categories to capture similar ideas. For example, ideas such as "review policies that restrict cost sharing between

business lines" and "modify the all business lines must pay for themselves policy" were consolidated under a category entitled "Revisit the One Utility Model." This process also helped identify general comments or ideas that better fit with one of the other five Topic Teams. These were either forwarded to the appropriate Topic Team or otherwise recorded in the tracking documents. An example of a general comment is "Economic development is difficult in Chelan County. Lack of space for new business development" (sic). See *Attachment A, EDTT Categorization of Similar Ideas*.

Out of over 100 ideas, the EDTT then subjected 21 options to a high-level qualitative assessment (*See Attachment B, EDTT Evaluation of 21 Ideas, Composite Score*), with the objective of identifying the "top-five" ideas. The EDTT used the same attributes as identified in the *Strategic Planning Valuation Criteria* table presented in the Introduction; however, the scaling description was much more qualitative in nature. For example, *in the Strategic Planning Valuation Criteria*, a "1" for "Impact of District Finances" is described as a $10-$100 million cost. Under the EDTT high-level qualitative assessment, a "1" was defined as "negative". This was done to quickly bring the top ideas to the forefront. In addition, composite scores were created by summing the calculations of each individual member of the EDTT. After the top-five ideas were identified, they were evaluated using the same attributes AND scaling definitions found in the *Strategic Planning Valuation Criteria* table. This is shown below in Figure 1, *Strategic Planning Evaluation Tool –Top 5 Economic Development Ideas.*

The biggest "lesson learned" from the EDTT evaluation process is that a wide variety of expertise and background of team participants was critical. This diversity helped shape the eventual "top-five" into ideas that were not specific to one part of the economy or one part of county. The process of narrowing down the ideas was also very iterative due to the volume of ideas. Narrowing ideas into categories required conscious decisions about why a particular idea was housed in a given category. EDTT discussions helped flesh out the final "top-five" into the best possible product. Finally, EDTT members were very candid about their views and their potential biases and positions. This frankness was helpful because it built trust and facilitated the necessary back-and-forth exchanges needed to garner support for the recommendations included in this report.

The EDTT recommends these "top-five" options to Strategic Partners, the public, and the Chelan County PUD Board of Commissioners for their consideration. The EDTT would also like to point out that there are synergies between some of the options such that if one is implemented, it might not take a large increase in incremental effort to implement the other option. An example of this is the connection between developing a "Power for Jobs" Evaluation Tool and the creation of a Chelan PUD Economic Development team/point-of-contact. It would be a natural fit for the Chelan PUD Economic Development contact to also be responsible for working with others to utilize the evaluation tool.

EDTT Top-Five Ideas

The EDTT scored its top-five ideas using the attributes and scaling descriptions in the *Strategic Planning Valuation Criteria* table. Figure 1 illustrates how each top-five idea measured up to the various metrics. A full description of each option, including a discussion of relevant factors that contributed to the EDTT's decision-making process is included below.

Figure 1

Economic Development - Proposal Evaluation Tool	Direct PUD Impacts					Indirect County Impacts					
	Financial Impact	Customer Equity	PUD Authority	Workforce Capability	Jobs	Economic Impact	Recreation	Health	Education	Community	Environment
Develop Allocating Power for Jobs Evaluation Tool*	5	4	5	5	3	5	1	1	2	1	0
Mentoring Program for High School Grade Levels	4	3	4	4	2	4	0	3	4	4	0
Higher Ed Curriculum (Tech and Professional)	4	3	4	3	3	4	0	3	4	4	0
Designated Chelan PUD Econ Development Team	4	4	4	3	3	4	0	2	2	3	0
Support Research and Development Opportunities	3	4	4	3	3	4	0	2	3	2	2

***Note-the developing power for jobs action was evaluated based on the development of the model, not the eventual results of the model which explains the low financial impact. An example of how the model could be used is found under the specific option.**

Options in Detail

The five options identified in Figure 1 are presented in greater detail below. A discussion of relevant factors such as cost and benefits is included.

Option Description - Develop Allocation Power for Jobs Evaluation Tool

Develop a consistent evaluation tool that accounts for the costs and benefits of attracting new industries to Chelan County in order to determine, on a case-by-case basis, how best to leverage Chelan PUD's surplus power. Develop a cap on the amount of energy available for this purpose. The estimated cost for developing the evaluation tool and model is less than $100,000. However, an allocation of a 20 megawatt block of power is estimated to be worth approximately $8.7 million on the wholesale power market annually.

Discussion of Relevant Factors

Chelan PUD's surplus energy position and its low cost power production gives the utility a unique opportunity to work with economic development entities to attract businesses with operations that are energy intensive or that value a carbon-free energy supply. The value of lost power generation revenue to Chelan County could be offset by other benefits, such as jobs and tax revenue.

The EDTT believes that a consistent Evaluation Tool is needed to assess the benefits and costs of each business recruitment opportunity in a consistent manner. A tool must be developed that accounts for the benefits and costs of a new business operation. The tool would help define the level of benefits needed to offset the loss in power value the PUD would realize on the wholesale market. Ultimately, the tool would help identify "power for jobs" opportunities that provide a positive net-benefit to Chelan County. This action is within Chelan PUD's authority because it involves supporting the economic development activities of others by valuing the power that is used to recruit businesses.

The EDTT developed a proposed Evaluation Tool using the *Strategic Planning Valuation Criteria* and broke it into "primary and secondary indicators" that allowed the tool to be better-tailored for economic development options. Under the proposed Evaluation Tool, an option has to score at least 16 points using the primary indicators (each indicator was scored between 1 – 5, with 5 being the best) to be considered an eligible "power for jobs". The EDTT identified the primary indicators as impact on Chelan PUD finances; workforce capability; family jobs; and community economic growth. Secondary indicators were identified as improved recreation; enhanced health or safety of our community; enhanced education opportunities; improved sense of community; and enhanced environment or aesthetics. If an economic development option provided benefits in these secondary categories, they received 1 -2 "bonus points" that contributed to their overall score. Bonus points are not applied to one category – the "community economic growth" primary indicator, which was required to have a score greater than 4 because the EDTT agreed that each "power-for-jobs" option should have a financial benefit to the county that is expected to cover its costs. A model was also developed which would be used to identify the appropriate indicator score for the "financial impact", "jobs" , and "economic impact" indicators.

The following graphic is an example of how a proposed data server farm might score using the proposed Evaluation Tool. The supporting model and assumption details are in Attachment C. It's important to note that the data used in the evaluation is at this time, high level and limited in nature. It is based on generalized assumptions and information that was readily available. For any "power for jobs" proposal, including a server farm, the outcome of an evaluation would be dependent on the proposal that is brought to the table. For this particular example, the assumptions are described under the evaluation summary.

Using the identified assumptions, the example scores well on some of the primary indicators. However, it scores low on financial impact, and most importantly it only scores a 3 on the Economic Development Indictor which as mentioned above, is not high enough to move the proposal forward. The cost is driven by the lost opportunity of obtaining market prices for the power that would be used by the data center. Also, the expected benefits are only estimated to cover 71% of the costs. The example scores some points from the secondary indicator with bonus point's added accordingly. As is, this particular example scores 15 points and would not pass the consideration threshold.

However, if the interested company would be willing to pay $40/mWh over fifteen years (compared to Chelan PUD's current industrial rate of 1.9 cents per kWh, or $19/mWh), then the financial impact to Chelan PUD would lessen, improving the financial impact score from 1 to 2 and bringing the potential total points to 16. The Economic Impact score would also improve since the additional revenue would cause the benefits to cover 100% of the costs. This would bring the overall score to a 17, which is above the thresh hold for the proposal to be considered. Other indicators could also be targeted to increase the score. Adding a clause to a power service agreement that would target recreational or educational opportunities could be a way to increase overall benefits and improve a proposal's score (this would need additional legal review). Such an Evaluation Tool will not just be helpful in evaluating an initial proposal; it could also be used to identify areas that, if addressed, could get to a "yes" for the benefit of the county.

Proposed Power for Jobs Evaluation	Primary				Secondary					
	Financial Impact	Workforce Capability	Jobs	Economic Impact	Recreation	Health	Education	Community	Environment	Total Primary Indicator
Server Farm	1	5	4	3	1	0	1	0	0	15

Assumptions:
20MW need (SWAG)
20 Employees (data center and other support)
Annual salary $45,000 (based on Article "Billion Dollar Data Center)
15 year life
68 acre site (Similar to Grant County)
Forward price curve with a MTM date of 10/9/2014
$19/mWh revenue from industrial rate (assume something similar to current rate)

The cost to develop this Evaluation Tool is low, since some of the work has already been done. It requires additional Chelan PUD staff time, and the time of other entities whose mission it is to spur economic development activities in the County. If companies are recruited to the area, then the value of a 20 megawatt block of power is estimated to be worth approximately $8.7 million per year[1]. For the purposes of this evaluation, it was assumed that at least the current industrial rate would be recovered which is approximately $19/mWh (~1.9 cents/kWh). This would equal approximately $3.3 million annually, for a net cost of $5.4 million annually. At such a rate, the revenue would not make up for the lost opportunity if the same power were sold on the wholesale market. Additional benefits would need to accrue to the cities and the County so that the overall County position is better.

The Evaluation Tool will be developed in a manner that can be used throughout the county. The tool will be useful to any entity seeking economic development opportunities by using Chelan PUD's power as an incentive to relocate or expand.

One additional item to consider is the setting of a cap on the amount of power available for potential new businesses. Identifying the size of a cap is something that will need to be developed in the future.

Refinement of this idea could begin immediately and theoretically have a life cycle that would last in perpetuity. Implementation of specific projects based on this recommendation would be on a case-by-case basis.

Option Description - Mentoring Program for High School Grade Levels

Support a high school job shadow/mentoring program to educate students on the types of jobs and careers Chelan PUD offers. The goal is to provide local students with opportunities to learn about interesting and well paying jobs and to keep and attract local talent. Over ten years, this option is

estimated to cost around $500,000.

Discussion of Relevant Factors

Currently, Chelan PUD has programs like River of Power for younger students. However, there is not a defined program for high-school grade levels. This option would support development of a high school student shadow/mentoring program to educate students on the types of jobs and careers Chelan PUD offers. Chelan PUD needs a diverse group of employees with different skill sets and capabilities. The scope of Chelan PUD operations and programs means there are many different career choices. This is not well known or understood by students who may have a narrow view of the utility industry.

The cost of this program is expected to be low. Chelan PUD employees would volunteer their time while Chelan PUD would allow employees to participate in the program during work hours. In general, staff volunteers would be expected to serve as in the community they live in. Since Chelan PUD staff live throughout the county, this should provide an opportunity to most of the high schools to participate. There may be some administrative costs, such as coordination with schools and matching students with mentors. Over ten years, this option is estimated to cost around $500,000. Most of this is lost opportunity cost in terms of staff time that could be dedicated to other projects instead of to participation in the mentorship program.

Students who participate in the program will learn about careers in the utility industry they may not have considered, and could even be inspired to pursue further education in high-demand utility jobs. The community could benefit if this program prompts more young people to stay in Chelan County to pursue attractive career options.

Although the EDTT believes Chelan PUD has the statutory authority to develop and participate in mentorship program, a program will need to be developed in conjunction with legal staff to ensure this is the case.

Option Description - Create Higher-Education Curriculum (Technical and Professional)

Team with other utilities or institutions to develop a curriculum that helps local students or those seeking a career shift to prepare for high-demand utility jobs. This option also has the goal of provide local students with opportunities to learn about interesting and well paying jobs and to keep and attract local talent. Over ten-years, this option is estimated to cost $950,000.

Discussion of Relevant Factors

Under this option, Chelan PUD would collaborate with education and academic institutions to identify "difficult to hire" technical and professional positions within Chelan PUD and the utility or hydropower industry. Chelan PUD would team with other utilities or institutions to develop a curriculum that helps local students gain the knowledge they need to compete for these jobs. One potential outcome could be that a 4-year degree program is developed locally.

Chelan PUD would support this program by 1) helping to define the difficult to hire jobs, and 2) allowing

Chelan PUD staff to volunteer time to teach courses at the local college. Cost drivers are similar to those described in the high school mentoring option; essentially, opportunity costs associated with staff time, and some administrative costs associated with program coordination. Over ten-years, this option is estimated to cost $950,000.

Chelan County would benefit from having a highly-educated local workforce that could help to recruit new companies to the area and attract/retain local talent that already has a vested interest in the community. Even if students did not gain employment at Chelan PUD, the skills and knowledge they would gain through the program would be beneficial to other industries and employers in the County.

Although the option needs to be carefully developed to stay within Chelan PUD's authority, Chelan PUD has a history of collaborating with higher education institutions to develop curriculum that supports the needs of the utility. An example of this collaboration is the Energy and Technology program that was a Wenatchee Valley College program.

Option Description - Designate a Chelan PUD Economic Development Team

Appoint a project manager and Executive Sponsor at Chelan PUD team/point to be dedicated to partnering with economic development agencies and businesses to facilitate collaboration on economic development projects within our statutory authority. Over ten years, the estimated cost is between $500,000 and $750,000.

Discussion of Relevant Factors

This option would appoint a project manager and Executive Sponsor from Chelan PUD that is dedicated to working with entities that are responsible for increasing economic development within the county. Examples of these entities are the Port of Chelan, any of the cities with Chelan County, or the NCW Economic Development District. This option would provide a clear path and designated resource for other entities to collaborate with Chelan PUD on economic development activities such as helping to evaluate "Power for Jobs" proposals.

The estimated cost of this option is associated with the lost opportunity cost of staff time needed to support regional economic development activities. Over ten years, assuming a ½ full time equivalent, the cost is estimated to be between $500,000 and $750,000.

Chelan County would benefit by having a single point-of- contact with Chelan PUD who is responsible and accountable for working with economic development entities throughout the county. The Chelan PUD point-of- contact would actively engage with other economic development entities, attend meetings and events targeted at improving economic development, and even participate in outreach to potential companies looking to relocate to the area, acting as an "energy/utility services" resource.

This option must be developed carefully to ensure it doesn't encroach on the responsibilities of entities that have specific economic development authority. The roles and responsibilities of the Chelan PUD point-of=contact position(s) must be crafted so that the utility does not exceed its statutory authorities while at the same time, recognizing the importance of power infrastructure on development activities.

Option Description - Support Research and Development Opportunities
Actively seek research and development opportunities that align with Chelan PUD's operations and can be deployed within the county. The estimated cost of this option over ten years is $2 million.
Discussion of Relevant Factors
Research and development activities can spur economic development in the communities where the activities take place. These activities can bring sales and revenues to local businesses and increased sales taxes to local government agencies and municipalities. Under this option, Chelan PUD would actively search out R&D opportunities that align with the utility's operations and are able to be deployed in the County. An example of this would be working with research and development organization to investigate better ways to supply back-up power to Stehekin. The outcome of this work could then be used in other areas of the County that have higher occurrences of outages due to remoteness of locations or more severe weather. The estimated cost of this option over ten years is $2 million. This assumed an average annual level of funding of $200,000. This could be higher or lower depending on the question to be answered and the scale of the study. The primary benefit would come from the opportunity to identify R&D opportunities that would enhance the service level, reliability, or cost efficiency of Chelan PUD's delivery of services to the county. Second, local businesses may benefit through the sales of products and services to consultants or other out-of-area experts that need to stay in the county to conduct the R&D. Third, taxes on the sales of the products and services would accrue to the appropriate local government. Finally, there may be an opportunity for local educational activities associated with the R&D work. Although a particular R&D effort may be limited to a specific geographic area in the county, the results of the study could be applicable to other parts of the county. For example, lessons learned in study to provide a better back-up electricity supply in Stehekin could benefit the residents in Plain and Lake Wenatchee. Chelan PUD can legally engage in this activity as long as the R&D efforts support Chelan PUD's authorized activities, such as providing reliable electric service.

Conclusion

The Economic Development Topic Team was asked to consider how Chelan PUD can act as a catalyst for economic development in Chelan County, and whether it could fill this role differently than it has in the past. Chelan PUD does not have statutory authority to engage in economic development, but its low-cost power and other assets and services such as fiber and parks have contributed to the vibrancy of this community. Over three months, our team evaluated almost 100 ideas generated by the public and team members with expertise in economic development issues. We narrowed these down to five options that built on existing utility strengths and recommended partnerships with economic development entities and educational institutions. The most significant recommendation is to define

how best to leverage Chelan PUD's surplus power, up to a defined cap, to attract new industries to the area. Two options support mentoring and education opportunities. One urges Chelan PUD to dedicate staff to facilitating economic development activities, and another recommends that Chelan PUD actively seek out research and development opportunities that can be deployed in the county.

The EDTT members are hopeful that these ideas, if implemented, will help Chelan PUD move to the next level of being a catalyst for economic development in Chelan County.

Contact Information

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Attachment A – EDTT Categorization of Similar Ideas

Category	Description	Idea
Power for Jobs	Allocating Power for Jobs (Evaluation Tool)	If Alcoa were to go away, reallocate power to other in county industrial customers.
		Set aside a block of power for allocation through a Port recruitment effort provided that the jobs meet or exceed the jobs per megawatt ratio of the ALCOA Wenatchee Works facility and a substantial investment added to the tax base that has the effect of shifting some of the existing tax burden to the industry that benefits directly from the low cost power.
		Develop/Support business use of our surplus power is our county.
		PUD set aside a block of power at a set rate for the Horan block, a 15 acre parcel in Olds Station that is the largest shovel ready industrial property in Chelan County, for a jobs producing industrial customer making a substantial investment added to the tax base that has the effect of shifting some of the existing tax burden to the industry that benefits directly from the low cost power.
		Use the excess Power 79% surplus to entice & bring industry & strong middle class jobs to the area. Something similar to Grant and Douglas County with the data centers. But hopefully more jobs. Tesla is currently shopping for places for a battery plant.
		All power currently allocated to ALCOA that is not used in the future, in whole or in part, shall be reserved for job producing, industrial uses in Chelan County.
		As a pilot project, the PUD would make available a block of power with a rate in excess of 3 cents for the recruitment of a jobs producing industrial customer to Chelan County including a substantial investment added to the tax base that has the effect of shifting some of the existing tax burden to the industry that benefits directly from the low cost power.
		Reserve a portion of excess power sales for use locally for industry or business that needs energy in excess of the current 5 MW cap for industrial rates. Use of this power should be evaluated and sold to business that produces a high return on investment in terms of an economic multiplier. Local agencies and the Port District can help as this is one of our primary objectives in economic development. For example, industries that provide living wage jobs have a tremendous impact on the overall local economy. Since Chelan County income levels are well below the state average, we have much room to improve in the area of increasing income levels of Chelan County citizens.

		Seek out research and development companies that need low-cost power to facilitate the development, demonstration and deployment of new technologies.
		Develop in partnership with cities and counties rate schedules for larger power users to facilitate economic development toward targeted industries. Utilize PUD authorities in conjunction with city and county zoning regulations as well as comprehensive plans to facilitate the growth and industry types that benefits the county in terms of economic output and quality of life.
	Value of Server Farms	Server farms?
		The tech industry is exploding in nearby areas such as Moses Lake and Ephrata. Given the need for large amounts of power that draw them to this area, this is a huge opportunity for us. Drawing "service farms" or bitcoin industry is a missed opportunity as they bring $ and economic development.
		I don't know how feasible it would be, but possibly Chelan could offer power incentives, provided the computing service provider would agree to bring more of the jobs here locally.
	Develop Guidelines for power for jobs formula	Explore an economic analysis based on incentives that would link number of watts offered based on number of jobs or another metric- such as sales tax projections or wages.
		Perform an input/output economic analysis to set the baseline of benefit to the residents of Chelan County with the current policy of subsidizing residential rates with power sold out of the county versus the benefits derived by the residents of the County from the use of this power to entice new, jobs producing industrial facilities to locate in Chelan County
Education	Mentoring/Job Shadow Program for High School	Create student shadow programs for high school students.
		Mentorship at the high school level such as "fire sciences" like program, focus on low income, introduce students to different careers.
	Education Collaboration	STEM museum at waterfront park
		Support STEM initiative at all Schools
		Develop/strengthen community outreach in schools.
		Continue to invest in creative education at all levels and connect the dots by using this as a basis to give to local industries renewable talent.

		Invest in our people especially through education and skills development. Look for partnerships with the K-12 schools and Wenatchee Valley college. Also look at partnerships with institutions such as the WSU Water Research Center and UW Public Administration Program. Is there an opportunities to develop a higher education institute here in the Wenatchee Valley given the centralized location of Wenatchee relative to hydropower in the Northwest? Not only does education and skills development apply to future needs of the PUD, but they also apply to other industries already in Chelan County such as PA&E, local governmental agencies, agriculture technology, manufacturing, etc. In addition, Chelan and Douglas County is a hub for governmental services which yields the largest piece of the pie in terms of gross wages paid (25%). Public Administration offers a great opportunity for our youth to stay or return to the region and provide the necessary work force of the future of those governmental services.
		Be a research hub, four year universities and energy grid enhancements.
		I noticed there is no card for education (in it's broadest terms). I think an educated work force is the best way to create economic development. I would love to discuss ways to partner and create unique and valuable education opportunities for all.
		Education and investing in educational programs support economic development. Helping our future citizens have outstanding education is critical. By investing in that we are helping the future care for our PUD. Investing our people, creates the talent pipeline in our community.
		Investigate feasibility of an energy research center, perhaps affiliated with WVC, focused on energy conservation, non-carbon energy sources and energy grid enhancements.
		Collaboration with WVC Automotive Tech program regarding EV's
	Higher Education Curriculum (Technical and Professional)	Develop an institute to teach young people (or those looking for a career change) about opportunities at the PUD and partner with the high schools and WVC to develop training programs for family-wage PUD jobs. This would be a pipeline for employees for the PUD, and would give our young people an opportunity to remain in our communities.

		Identify the most difficult to hire or technically unique positions within the PUD and the utility or hydroelectric industry. Team with other utilities and/or an institution of higher education to create an institute school, college or university based in the valley that educates and develops such skill sets, while also performing important research on process improvements or developments related to those skill sets. Team with other utilities in the region, nation and world to help support the institute, so that it is broader reaching than just Chelan County, but instead becomes something of national or international significance. An example of such an institute is the Institute of Paper Science and Technology which was supported directly by the paper industry for 75 years and has since been integrated with Georgia Institute of Technology http://www.ipst.gatech.edu/alumni/inst_hist/.
		Develop education programs to train youth for the jobs of the future. Industries and jobs that we desire to attract require an educated workforce. Workforce training is one of the keys to successfully developing industry clusters. Look for opportunities to educate youth in innovation. Look for opportunities to educate youth with the skills that the PUD needs for the future… i.e.. Energy, environmental stewardship, recreation, public administration, etc.
		Support trades programs and apprenticeships We could leverage, and enhance, this quality of life by using it to attract energy resource jobs.
		STEM oriented electric vehicle curriculum in collaboration with ESD focused on high schools and alternative schools.
		Participate in planning to explore creation of an institute for electric vehicle application
Economic Development and Collaboration	Invest in Community	Take a close look at any and all municipalities who are trying to do any type of activity that could clearly fit within the PUD's implied or express authority. If there is overlap (water delivery? Water treatment? Providing free internet in publicly accessible spaces? Delivery of electricity to public spaces? Electric charging stations?), offer to take those activities over for the municipalities in a way that will not reduce the municipality's income. This will free up municipal resources (many of which are strapped in Chelan county) that could then be focused on those ED needs that the PUD cannot pursue because they are outside of its authority.
		Invest in economic development assets where/when appropriate for existing businesses, such as Confluence Health. What do they need to be as successful as possible that the PUD can provide?
		Invest in Performing Arts Center of Wenatchee

		Crew support to community activities. Leavenworth lighting is an example.
		Assist with relocation of the BNSF facility to improve access to the waterfront and park.
	Industry Diversification	Bring in more internet & software companies, if possible
		Yes, bring in more jobs and cool, green industry and economic development
		We need a greater diversity of product. Power, fiber, and high quality of life should enable us to bring more industry here to create higher wage jobs. As a man from Seattle said on the chair lift at Mission Ridge, "you need to sell things to China!"
		Help diversify from tourism and ag - more blue collar and other manufacturing.
		Support the installation of more commercial and residential solar facilities with the additional goal of creating jobs, training workers, etc.
	Designated Chelan PUD Econ Development Team	Have certain chosen PUD staff stay closely connected to the already-in-motion ED activities throughout the county. Hire a few more people at the PUD (increase your bench for your core activities) but let this bench strength give some select employees the time to train and become regional ED experts – folks that stay closely aligned with the organizations directly involved in ED *in all communities served by the PUD*.
		Create an Economic Development Think Tank where PUD employees and other citizens can come together to work on economic development initiatives using PUD resources (I'm thinking along the lines of Microsoft's Garage, LinkedIn's InCubator, Apple BlueSky).
		Set up a Chelan County Economic Development Team within the PUD that is dedicated to the ongoing mission of bringing ED to "greatest number of people for longest period of time." (This would not have to be a team in existence for perpetuity. Try it out for a year or two. Or just do it when the coffers get full enough).
	Support Research and Development Opportunities	Support research and development opportunities that benefit Chelan County.
	Collaboration/Leverage Local Partnerships	Better target industries and jobs using "powers" and abilities in conjunction with other entities.
		Encourage the Port Dist. To do a better job of recruiting
		Set up an Economic Development endowment fund (a percentage of actual excess earnings in blue line scenario) to be made available for small, grass-roots, local ED activities.

		Leverage partnerships with other agencies such as State Parks, cities, counties, etc. For example, the city uses Community Development Block Grant Funds to address poverty in neighborhoods. These programs are established with a structure, but are short of funding. Leveraging these programs with targeted funding could have a substantial impact on poverty in Chelan County which is a very real threat to our future and quality of life. LED lighting is a great example of a CDBG program.
		Be responsive to community economic development needs. Be open to listen to community needs, and assist where and when possible.
		As the current chairmen of the NCW Economic Development District, I would love to partner with the Chelan Co. PUD….to see what creative ideas we could put together…together…to build a bright future.
		Be strategic about economic development to ensure it will truly benefit the greatest number of people for the longest period. We want industries that will *increase the quality of* life in this region, not just increase number of jobs of any kind. Work with local economic development groups to identify target, high-potential industries for recruitment and go after them with strong recruitment package that is made up of incentives from municipalities, Port, PUD, etc.
		Leverage investments by the PUD to obtain greater return. Look for multipliers on the investment of 1.2 to 1.4 which is at the high range of economic impact.
		Leverage grant funding
		The PUD cannot attract businesses on its own. There needs to be more involvement in improving schools, shopping, and mass transit. Do not make deals with low-employment businesses, like Server farms. (Collaboration)
		Create ways to push “authority” up-river
Environmental	Investigate Additional Renewables such as Biomass	Biomass generation facility to facilitate healthy forests and jobs.
		Help with forest health issues - a lot of our forest are brittle and will cause big forest fires.
		Improve the health of forests in Chelan County to reduce the risk of catastrophic forest fires. One way to do this might to buy or create biomass energy (a “renewable resource” under I-937) in Chelan County in order to create jobs and help improve forest health
		Investigate the feasibility of producing biomass electricity from Chelan County forests (Weyerhaeuser or other lands) or of purchasing power from a third party producing biomass electricity from Chelan County forests.

		Explore carbon reduction efforts that could benefit Chelan County
	Collaborate with Others to Enhance Land Management	Communicate with The Nature Conservancy about its efforts to improve forest health by increasing revenue for forest landowners.
		Be involved in the County's Wenatchee Community Lands Plan effort regarding the Weyerhaeuser lands
		Investigate whether there are any habitat, water quality or other issues that might suggest getting involved in the future of the Weyerhaeuser 50,000 acres.
		Consider whether there are ways that the PUD can work with private or public landowners to promote healthier forests that would reduce the forest fire risk to PUD infrastructure and customer service levels.
		Look for opportunities to assist with remediation of the old municipal landfill.
Rates and Fees Policies	Modify Underground Conversion Policy	Modify the overhead to underground conversion policy. In our older neighborhoods, much of the above ground infrastructure is unsightly and in need of upgrading. Is there an opportunity to reinvest in the distribution infrastructure and improve the aesthetics and thus values of low income neighborhoods which typically are in the older sections of town. This can be implemented county wide.
	Review 5 MW industrial cap	Reevaluate the 5 MW cap for industrial customers
		Revisit 5 MW cap
	Consider Special Rates for Local Entities, Seniors, and Low Income	Discounted rate for power be made available for other local government entities in Chelan County to help them lower their operational costs.
		Adopt a rate schedule specific to schools and local governmental agencies to help reduce their costs of operations.
		Develop a utility assistance for low income households. Expand existing programs for seniors and disabled to qualifying low income households.
	Change to a One Utility Model	Review policies that restrict cost sharing between business lines. Go to "one utility model".
		Modify the "all lines of business must pay for themselves" policy to allow flexibility to assist small infrastructure systems to pay for required large capital costs to the system.
		If supporting ED of the region is a goal for the PUD, it is going to be difficult for the PUD to continue its policy of each line of business being self-sustaining, unless accounting adjustments are made to recognize the part of operating costs for some lines of business are actually investments in the ED of the region. I fully applaud the structure and fiscal responsibility of insisting that each line of business be self-sustaining, but *if regional ED is a*

		priority, there does need to be adjustments made if some lines more directly contribute to particular ED goals than others (high quality fiber and water systems or electrical charging stations, for example). Developing a mechanism within management reporting to quantify the regional ED value and credit it to the respective lines of business that are making the investments might be a good idea
	Review and Update Line Extension Policy	Implement a policy to pay for line extensions and relocations which are a significant inhibitor to infill in the city. This applies mainly to power and fiber, but also may apply to water.
		Look at infrastructure connection fees and line extensions
		Implement a policy to pay for line extensions and utility relocations when driven by development. Often infill development is hampered due to the cost for relocating PUD infrastructure. The cost of development impacts the supply and price of housing which is a problem for our region. Policies that help increase the number of units as well as the lowers the cost of development would provide great value to Chelan County.
		Otherwise, consider ways to facilitate the up-front investment. Borrow innovative financing ideas from efficiency and renewables. Perhaps there's a parallel to PACE that would work here -- hydropower is clean energy, after all, and the initial investment benefits the future owners of a home. Or take a look at the on-bill financing mechanisms that are being used for efficiency measures. Also consider why Latecomer Fees ever expire.
Ideas presented to team after categorization occurred		Trade Lake Chelan level for power-enhance recreation and associated tourism
		Purchase floating docks for Lake Chelan lakeside residents-may be less expensive then changing operations.
		Develop an economic development model that takes into account things like value of tourism, increased agriculture, fiber telecom, etc.
General Comments received	More PR about power rates - esp. to the west side of the state.	
	This has potential - bring a group together to brainstorm!	
	Economic development is vital to our area. CCPUD is in the forefront and should stay there.	
	Economic development is difficult in Chelan Co. Lack of space for new business development.	
	Develop a Mexican sister city - specifically Orizaba, State of Veracruz. Promote tourism and business opportunities between the two cities.	
	Great plan on reducing debt	

	Build a fund for reserves and lose the lower expected revenue occurs in the future or try a debt reduction continuous. Remember there is a region not just the county. Too much emphasis on Chelan.
	Fiscally conservative approach is the best
	Low power rates - fantastic - brings power hungry business to the area. (Statement)
	The maintenance of low electricity rates for our population is already a critical part of the region's economic development.

Attachment B, EDTT Evaluation of 21 Ideas, Composite Score

Economic Development Evaluation Criteria-Composite Score

		Direct Impacts on PUD						Impacts to the Community (action and results)									
Category	**Description**	Length of benefits (1 less than a year, 3 five years, 5 greater than 10 years.)	Financial Impact (1 negative, 3 neutral, 5 positive benefit)	Customer Equity (1 small group or population benefits, 5 whole county benefits)	PUD Authority(1 can't do, 3 implicit authority, 5 explicit authority)	Workforce (1 no staff or capability, 3 internal capability but no staff assigned, 5 staff assigned and capable Capability	Innovative (1 not innovative, 3 average, 5 cutting edge)	Jobs (1 decrease in jobs, 3 neutral, 5 large increase in jobs)	Economic Impact (1 negative economic impact, 3neutral, 5 positive)	Recreation (1 decreases recreation opportunities, 3 neutral, 5 increase in opportunity)	Health (1 decreases health, 3 neutral, 5 increase in health benefits)	Education (1 decreases education opportunities, 3 neutral, 5 increase in education)	Community (1 negative impact to sense of community, 3 neural, 5 increase in sense of community)	Environment (1 degrades the environment, 3 neutral, 5 benefit to the environment)	Attracts/Retains Local Talent (1 does not support attracting local talent, 3 neutral, 5 supports and actively seeks to attract local talent)	Total	Comments
Power for jobs	**Allocating Power for Jobs (Evaluation Tool)**	**29**	**20**	**28**	**32**	**31**	**25**	**30**	**30**	**21**	**26**	**25**	**26**	**19**	**30**	**372**	Review of the 5MW cap will be covered here.
	Value of server farms	25	17	19	31	26	21	22	27	21	21	22	21	21	22	316	Developing a value for server farms can be incorporated into the "Develop guidelines for power for jobs formula" or the "Develop an economic development model that takes into account things like value of tourism, increased agriculture, fiber telecom, etc."
	Develop guidelines for power for jobs formula	**32**	**23**	**26**	**31**	**23**	**26**	**30**	**32**	**21**	**26**	**25**	**26**	**23**	**27**	**371**	This has been combined with the allocating power for jobs decription (evalua
Education	**Mentoring/Job Shadow program for High School Grade Levels**	**33**	**24**	**28**	**28**	**26**	**24**	**24**	**26**	**21**	**23**	**32**	**30**	**21**	**29**	**369**	
	Education collaboration	27	21	27	27	25	27	24	29	21	22	34	28	22	29	363	Education collaboration will be consolidated with higher ed curriculum
	Higher education curriculum (professional/technical)	**32**	**20**	**26**	**28**	**24**	**29**	**26**	**28**	**21**	**23**	**30**	**28**	**22**	**30**	**367**	
Economic Development Collaboration	Invest in the community	32	22	28	24	24	25	24	27	24	24	24	27	24	24	353	
	Industry diversification	30	22	28	23	26	26	26	27	22	23	21	27	22	30	353	
	Designated Chelan PUD Econ Development Team	**29**	**27**	**32**	**31**	**25**	**29**	**29**	**28**	**22**	**22**	**24**	**27**	**22**	**27**	**374**	
	Support Research and Development Opportunities	**34**	**23**	**25**	**28**	**27**	**28**	**28**	**30**	**22**	**22**	**30**	**29**	**22**	**31**	**379**	
	Collaboration and leveraging of local partnerships	29	24	29	26	22	24	26	28	24	22	22	29	22	24	351	This is a tactic to accomplish the other items.
Environmental	Investigate additional renewables such as biomass	29	15	20	24	23	24	27	22	21	23	23	22	30	25	328	
	Collaborate with others to enhance land management	29	20	24	23	23	23	23	25	28	25	22	29	29	24	347	
Rates/Policies and Fees	Modify underground conversion policy	26	22	23	26	24	22	21	22	22	21	21	24	23	21	318	
	Review industrial 5 MW cap	32	21	28	32	28	23	30	29	21	21	23	24	21	28	361	This is going to be incorporated into the allocating power for jobs, evaluatio tool, idea
	Consider special rates for local entities, seniors, and low	31	19	22	31	24	22	20	27	23	24	24	24	21	21	333	
	Change to a one-utility model	26	18	21	28	24	22	21	24	21	21	22	23	21	21	313	
	Review and update line extension policy	27	19	20	28	21	20	22	23	23	22	21	21	20	21	308	
Additional Ideas	Chelan Lake Level for Power	5	1	3	4	5	3	4	4	5	3	3	4	3	3	350	These items were just brought forward. Andrew Grasseell has taken an initial shot at scoring the new items. The team needs to review. The total for these is simlpy the sum of the scores multiplied by 7 (the number of reviewers that sent in evaluation sheets, this assumes Andrew's view is consistent with others).
	Purcahse floating boat docks on Lake Chelan	5	2	2	4	5	3	4	4	4	3	3	3	3	3	336	
	Develop an economic development model that takes into account things like value of tourism, increased agriculture, fiber telecom, etc.	5	2	3	5	5	4	4	4	3	3	4	3	3	3	357	

Attachment C Economic Development "Power for Jobs" Model-Server Farm Example (4 Scenarios).

As part of the "Power for Jobs" evaluation criteria a model was developed that is designed to assess information associated with 1) the financial impacts to Chelan PUD; 2) the jobs associated with a power for jobs proposal; and 3) estimate the Economic Impact to the County. A server farm was used as the example. The model assumptions for the server farm are not based on a specific proposal but on information that was readily available. This information was gathered from a variety of sources including EDTT members, web searches, and articles. Four scenarios are shown below; the first one is considered the base case and was used to populate the indicator scores found in the Evaluation Criteria example. The three additional scenarios show how the results change based on changing the key assumptions, such as the number of MWs and the price Chelan PUD can receive from the energy on the wholesale market. Additional refinement will need to be made to the model to ensure all the cost and benefit line items are accounted for.

Scenario 1 Base Case-Server Farm Analysis 20 MW of power at current industrial rate

MW[1]	**20**
Employees (direct and indirect)	**20**
Annual employee salary[2]	**$47,500**
Contract Life (years)	15
Total Property Tax Revenue* (annual)	$ 1,546,058.84
% Tax Revenue that is "extra"	50%
Retail Rate ($/MWh)	19
Discount Rate	7%
Inflation	2.5%

Indicators

Financial Impact to PUD	($45,845,181.74)
Jobs	238
Economic Impact (Benefit/Cost Ratio)	0.71

Server Farm Costs and Benefits

Costs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Loss of Market Sales	$ (5,574,426)	$ (5,874,602)	$ (6,324,720)	$ (6,813,236)	$ (7,300,730)	$ (7,738,146)	$ (8,216,150)	$ (8,684,226)	$ (9,171,574)	$ (9,666,222)	$ (10,165,980)	$ (10,676,542)	$ (11,196,740)	$ (11,721,318)	$ (12,254,656)
PUD paid Public Utility Tax & Privilege Tax on retail	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**	**$ (200,174)**
Services and Infrastructure	$ (773,029)	$ (792,355)	$ (812,164)	$ (832,468)	$ (853,280)	$ (874,612)	$ (896,477)	$ (918,889)	$ (941,861)	$ (965,408)	$ (989,543)	$ (1,014,282)	$ (1,039,639)	$ (1,065,630)	$ (1,092,270)
Total	**$ (6,547,629)**	**$ (6,867,131)**	**$ (7,337,058)**	**$ (7,845,878)**	**$ (8,354,184)**	**$ (8,812,932)**	**$ (9,312,801)**	**$ (9,803,289)**	**$ (10,313,609)**	**$ (10,831,804)**	**$ (11,355,697)**	**$ (11,890,998)**	**$ (12,436,553)**	**$ (12,987,122)**	**$ (13,547,100)**
Benefits															
Jobs	$950,000	$973,750	$998,094	$1,023,046	$1,048,622	$1,074,838	$1,101,709	$1,129,251	$1,157,483	$1,186,420	$1,216,080	$1,246,482	$1,277,644	$1,309,585	$1,342,325
Property Tax Revenue	$ 1,546,059	$ 1,584,710	$ 1,624,328	$ 1,664,936	$ 1,706,560	$ 1,749,224	$ 1,792,954	$ 1,837,778	$ 1,883,723	$ 1,930,816	$ 1,979,086	$ 2,028,563	$ 2,079,277	$ 2,131,259	$ 2,184,541
Utility Tax if in City	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728	$ 199,728
Construction Sales Tax	$ 1,300,000														
Sales Tax on Rebuild (every 5 years)															
Retail Rate	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800	$ 3,328,800
Total	**$ 7,324,587**	**$ 6,086,988**	**$ 6,150,950**	**$ 6,216,510**	**$ 6,283,710**	**$ 6,352,589**	**$ 6,423,191**	**$ 6,495,558**	**$ 6,569,733**	**$ 6,645,763**	**$ 6,723,694**	**$ 6,803,573**	**$ 6,885,450**	**$ 6,969,373**	**$ 7,055,394**
Net Benefit/Cost	**$ 776,957**	**$ (780,143)**	**$ (1,186,108)**	**$ (1,629,368)**	**$ (2,070,474)**	**$ (2,460,342)**	**$ (2,889,610)**	**$ (3,307,732)**	**$ (3,743,876)**	**$ (4,186,040)**	**$ (4,632,003)**	**$ (5,087,424)**	**$ (5,551,103)**	**$ (6,017,749)**	**$ (6,491,707)**

Scenario 2 Server Farm Analysis-Used "goal seek" to determine MW needed at current industrial rate to make Economic Impact B/C a 1.0

MW[1]	8.8
Employees (direct and indirect)	20
Annual employee salary[2]	$47,500
Contract Life (years)	15
Total Property Tax Revenue* (annual)	$ 1,546,058.84
% Tax Revenue that is "extra"	50%
Retail Rate ($/MWh)	19
Discount Rate	7%
Inflation	2.5%

Indicators

Financial Impact to PUD	($20,171,879.96)
Jobs	238
Economic Impact (Benefit/Cost Ratio)	1.00

Server Farm Costs and Benefits

Costs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Loss of Market Sales	$ (2,452,747)	$ (2,584,825)	$ (2,782,877)	$ (2,997,824)	$ (3,212,321)	$ (3,404,784)	$ (3,615,106)	$ (3,821,059)	$ (4,035,493)	$ (4,253,138)	$ (4,473,031)	$ (4,697,678)	$ (4,926,566)	$ (5,157,380)	$ (5,392,049)
PUD paid Public Utility Tax & Privilege Tax on retail	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**	**$ (88,077)**
Services and Infrastructure	$ (773,029)	$ (792,355)	$ (812,164)	$ (832,468)	$ (853,280)	$ (874,612)	$ (896,477)	$ (918,889)	$ (941,861)	$ (965,408)	$ (989,543)	$ (1,014,282)	$ (1,039,639)	$ (1,065,630)	$ (1,092,270)
Total	**$ (3,313,853)**	**$ (3,465,257)**	**$ (3,683,117)**	**$ (3,918,369)**	**$ (4,153,678)**	**$ (4,367,473)**	**$ (4,599,660)**	**$ (4,828,025)**	**$ (5,065,430)**	**$ (5,306,622)**	**$ (5,550,651)**	**$ (5,800,037)**	**$ (6,054,281)**	**$ (6,311,086)**	**$ (6,572,396)**
Benefits															
Jobs	$950,000	$973,750	$998,094	$1,023,046	$1,048,622	$1,074,838	$1,101,709	$1,129,251	$1,157,483	$1,186,420	$1,216,080	$1,246,482	$1,277,644	$1,309,585	$1,342,325
Property Tax Revenue	$ 1,546,059	$ 1,584,710	$ 1,624,328	$ 1,664,936	$ 1,706,560	$ 1,749,224	$ 1,792,954	$ 1,837,778	$ 1,883,723	$ 1,930,816	$ 1,979,086	$ 2,028,563	$ 2,079,277	$ 2,131,259	$ 2,184,541
Utility Tax if in City	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880	$ 87,880
Construction Sales Tax	$ 1,300,000														
Sales Tax on Rebuild (every 5 years)															
Retail Rate	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672	$ 1,464,672
Total	**$ 5,348,611**	**$ 4,111,013**	**$ 4,174,974**	**$ 4,240,535**	**$ 4,307,734**	**$ 4,376,614**	**$ 4,447,215**	**$ 4,519,582**	**$ 4,593,758**	**$ 4,669,788**	**$ 4,747,719**	**$ 4,827,598**	**$ 4,909,474**	**$ 4,993,397**	**$ 5,079,418**
Net Benefit/Cost	**$ 2,034,758**	**$ 645,756**	**$ 491,857**	**$ 322,166**	**$ 154,057**	**$ 9,141**	**$ (152,444)**	**$ (308,443)**	**$ (471,673)**	**$ (636,834)**	**$ (802,932)**	**$ (972,439)**	**$ (1,144,807)**	**$ (1,317,689)**	**$ (1,492,977)**
County NPV	**$33,696.34**														

Scenario 3 Server Farm Analysis-Used "goal seek" to determine $/mWh needed to make Economic Impact B/C a 1.0

MW[1]	**20**
Employees (direct and indirect)	**20**
Annual employee salary[2]	**$47,500**
Contract Life (years)	15
Total Property Tax Revenue* (annual)	$ 1,546,058.84
% Tax Revenue that is "extra"	50%
Retail Rate ($/MWh)	34.5
Discount Rate	7%
Inflation	2.5%

Indicators

Financial Impact to PUD	($22,599,051.82)
Jobs	238
Economic Impact (Benefit/Cost Ratio)	1.00

Server Farm Costs and Benefits

Costs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Loss of Market Sales	$ (5,574,426)	$ (5,874,602)	$ (6,324,720)	$ (6,813,236)	$ (7,300,730)	$ (7,738,146)	$ (8,216,150)	$ (8,684,226)	$ (9,171,574)	$ (9,666,222)	$ (10,165,980)	$ (10,676,542)	$ (11,196,740)	$ (11,721,318)	$ (12,254,656)
PUD paid Public Utility Tax & Privilege Tax on retail	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**	**$ (363,474)**
Services and Infrastructure	$ (773,029)	$ (792,355)	$ (812,164)	$ (832,468)	$ (853,280)	$ (874,612)	$ (896,477)	$ (918,889)	$ (941,861)	$ (965,408)	$ (989,543)	$ (1,014,282)	$ (1,039,639)	$ (1,065,630)	$ (1,092,270)
Total	**$ (6,710,929)**	**$ (7,030,431)**	**$ (7,500,358)**	**$ (8,009,178)**	**$ (8,517,484)**	**$ (8,976,232)**	**$ (9,476,101)**	**$ (9,966,589)**	**$ (10,476,909)**	**$ (10,995,104)**	**$ (11,518,997)**	**$ (12,054,298)**	**$ (12,599,853)**	**$ (13,150,422)**	**$ (13,710,400)**
Benefits															
Jobs	$950,000	$973,750	$998,094	$1,023,046	$1,048,622	$1,074,838	$1,101,709	$1,129,251	$1,157,483	$1,186,420	$1,216,080	$1,246,482	$1,277,644	$1,309,585	$1,342,325
Property Tax Revenue	$ 1,546,059	$ 1,584,710	$ 1,624,328	$ 1,664,936	$ 1,706,560	$ 1,749,224	$ 1,792,954	$ 1,837,778	$ 1,883,723	$ 1,930,816	$ 1,979,086	$ 2,028,563	$ 2,079,277	$ 2,131,259	$ 2,184,541
Utility Tax if in City	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664	$ 362,664
Construction Sales Tax	$ 1,300,000														
Sales Tax on Rebuild (every 5 years)															
Retail Rate	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400	$ 6,044,400
Total	**$ 10,203,123**	**$ 8,965,524**	**$ 9,029,486**	**$ 9,095,046**	**$ 9,162,246**	**$ 9,231,125**	**$ 9,301,727**	**$ 9,374,094**	**$ 9,448,269**	**$ 9,524,299**	**$ 9,602,230**	**$ 9,682,109**	**$ 9,763,986**	**$ 9,847,909**	**$ 9,933,930**
Net Benefit/Cost	**$ 3,492,193**	**$ 1,935,093**	**$ 1,529,128**	**$ 1,085,868**	**$ 644,762**	**$ 254,894**	**$ (174,374)**	**$ (592,495)**	**$ (1,028,640)**	**$ (1,470,804)**	**$ (1,916,767)**	**$ (2,372,188)**	**$ (2,835,867)**	**$ (3,302,513)**	**$ (3,776,470)**
County NPV	**$109,230.61**														

Scenario 4 Server Farm Analysis-Used "goal seek" to determine $/mWh needed to make Financial Impact to the PUD $0

MW[1]	**20**
Employees (direct and indirect)	**20**
Annual employee salary[2]	**$47,500**
Contract Life (years)	15
Total Property Tax Revenue* (annual)	$ 1,546,058.84
% Tax Revenue that is "extra"	50%
Retail Rate ($/MWh)	49.6
Discount Rate	7%
Inflation	2.5%

Indicators

Financial Impact to PUD	$0.00
Jobs	238
Economic Impact (Benefit/Cost Ratio)	1.28

Server Farm Costs and Benefits

Costs	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Loss of Market Sales	$ (5,574,426)	$ (5,874,602)	$ (6,324,720)	$ (6,813,236)	$ (7,300,730)	$ (7,738,146)	$ (8,216,150)	$ (8,684,226)	$ (9,171,574)	$ (9,666,222)	$ (10,165,980)	$ (10,676,542)	$ (11,196,740)	$ (11,721,318)	$ (12,254,656)
PUD paid Public Utility Tax & Privilege Tax on retail	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**	**$ (522,228)**
Services and Infrastructure	$ (773,029)	$ (792,355)	$ (812,164)	$ (832,468)	$ (853,280)	$ (874,612)	$ (896,477)	$ (918,889)	$ (941,861)	$ (965,408)	$ (989,543)	$ (1,014,282)	$ (1,039,639)	$ (1,065,630)	$ (1,092,270)
Total	**$ (6,869,684)**	**$ (7,189,185)**	**$ (7,659,112)**	**$ (8,167,932)**	**$ (8,676,238)**	**$ (9,134,986)**	**$ (9,634,855)**	**$ (10,125,343)**	**$ (10,635,664)**	**$ (11,153,858)**	**$ (11,677,751)**	**$ (12,213,052)**	**$ (12,758,607)**	**$ (13,309,176)**	**$ (13,869,155)**
Benefits															
Jobs	$950,000	$973,750	$998,094	$1,023,046	$1,048,622	$1,074,838	$1,101,709	$1,129,251	$1,157,483	$1,186,420	$1,216,080	$1,246,482	$1,277,644	$1,309,585	$1,342,325
Property Tax Revenue	$ 1,546,059	$ 1,584,710	$ 1,624,328	$ 1,664,936	$ 1,706,560	$ 1,749,224	$ 1,792,954	$ 1,837,778	$ 1,883,723	$ 1,930,816	$ 1,979,086	$ 2,028,563	$ 2,079,277	$ 2,131,259	$ 2,184,541
Utility Tax if in City	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065	$ 521,065
Construction Sales Tax	$ 1,300,000														
Sales Tax on Rebuild (every 5 years)															
Retail Rate	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409	$ 8,684,409
Total	**$ 13,001,532**	**$ 11,763,934**	**$ 11,827,895**	**$ 11,893,456**	**$ 11,960,655**	**$ 12,029,535**	**$ 12,100,136**	**$ 12,172,503**	**$ 12,246,679**	**$ 12,322,709**	**$ 12,400,640**	**$ 12,480,519**	**$ 12,562,395**	**$ 12,646,318**	**$ 12,732,339**
Net Benefit/Cost	**$ 6,131,848**	**$ 4,574,748**	**$ 4,168,783**	**$ 3,725,523**	**$ 3,284,417**	**$ 2,894,549**	**$ 2,465,281**	**$ 2,047,160**	**$ 1,611,015**	**$ 1,168,851**	**$ 722,888**	**$ 267,467**	**$ (196,212)**	**$ (662,858)**	**$ (1,136,816)**
County NPV	**$24,150,980.77**														

References

*Based on a 68 acre Grant County Site. There is a point of view that the tax revenue is neutral as it is intended to offset costs associated with services and infrastructure needs. For the purposes of this analayis 50% of the tax revenue was assumed to be "extra"

1. This is just an estimate. Actual requests have been in the 10-50MW range.

2. "Billion data center" article from 2013. This article provides average salary information.
http://www.datacenterknowledge.com/archives/2013/04/29/the-billion-dollar-data-centers/2/

3. http://www.greenm3.com/gdcblog/2008/1/11/of-data-center-employees-yahoo-askcom-intuit-and-microsoft-i.html
This article provided info on number of employees (4 data centers that were reported on have 180 employees. This equals an average of 45 per facility). Microsoft was one of the data center owners and they are larger than the others. Intuit, which is the basis for the property tax information, is one of the smaller facilities so 20 employees were used.