Comparison of ASP Licensing and DIDF Process Cost Benefit Analysis Methods

Cost Benefit Analysis Element	ASP Licensing Method	DIDF Process Method	Discussion (Pros and Cons)[1]
Purpose	Compare various alternatives to determine which meets a set of project objectives in the most cost effective manner.	Use high level screening and prioritization to identify, among several projects identified in the current planning cycle, which have the highest chance of success in utilizing DERs to defer traditional planned investments.	The distinct difference in purpose between the analyses makes it difficult to perform an apples-to-apples comparison of the methodologies.
Regulatory Framework	CPCN/CEQA	DRP Distribution Investment Deferral Framework (DIDF)	Each regulatory framework has distinct objectives and their methodologies are designed to be appropriate for these objectives. The cost benefit analysis for ASP is intended to provide supplemental information to be considered holistically with other, more broad considerations of project need and environmental and public impact under CEQA. The DIDF framework is ultimately designed to introduce market competition and non-wire alternatives (NWAs) to defer, but not necessarily replace, traditional wires solutions.
System Planning Level	Subtransmission	Distribution and Subtransmission facilities under CPUC jurisdiction (non CAISO operated)	Planning at the subtransmission level necessarily considers elements beyond capacity, including reliability and resiliency. The scale of the affected subtransmission planning areas is such that uncertainties in load forecasts and volatility in load year to year require a comprehensive approach to system planning to provide flexibility in operations. While the capacity relief offered by NWAs under DIDF provides some reliability benefit as a result of increased operational flexibility associated with increased capacity margin, the ASP licensing approach allows for consideration of traditional solutions along with NWAs to fully address the unique larger scale subtransmission planning elements.

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Project Alternatives	Developed in the analysis to meet specific project objectives and to satisfy subtransmission planning criteria and guidelines. Alternatives are developed by internal experts with input from external stakeholders including the CPUC ED.	Use RFO to employ third party DERs to defer all the grid needs of the planned investment in a cost effective manner. In the DIDF process, specific alternatives are not considered in the prioritization process but rather introduced later by market participants through bidding.	The DIDF process has the potential to introduce novel solutions and competitive pricing through market-driven innovation, but specific project alternatives are not considered at the time of the analysis. The ASP licensing C/B analysis does not preclude consideration of such innovative market solutions for capacity needs at a future date similar to DIDF, but third party developer solutions are not sought at the time of the analysis.
Planning Horizon	Alternatives developed for 10 year planning horizon but 30 year cost benefit analysis is conducted.	Consider only planned investments that will be in operation 4-5 years from present day and with the greatest deferral window being 10 years or less from present day.	A short term focus of DIDF limits impact of future uncertainty in load and can facilitate later consideration of developments in markets and technology that could offer added benefits or reduced costs. A longer term horizon can potentially introduce more economic and robust long term solutions, especially with large electrical system needs. While built out for 30 years, the ASP C/B approach addresses benefits and costs on an incremental yearly basis such that it provides visibility to cumulative benefits and costs at any and all points in time throughout the 30 year analysis (e.g., 10 years and 30 years). Ultimately the project licensing process allows the CPUC to determine whether a short term or longer term perspective is more appropriate based on consideration of cost and risk.

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Metrics	Metrics address the effectiveness of meeting capacity, reliability and resiliency needs over both near term and longer term horizons. (Expected Energy Not Served) EENS - Quantitative metric to measure the magnitude and period of a capacity deficiency under normal and contingency conditions: EENS (N-0) and EENS (N-1), respectively. FLEX-1 - Quantitative metric to measure the amount of load that can be served when two lines are out of service and system tie-lines are utilized. FLEX-2 - Quantitative metric to measure the load that can be served when the system experiences an unplanned outage of one or more 500/115kV transformers and system tie-lines are utilized.	After candidate deferral projects are identified using technical and timing screens, the following three prioritization metrics are used to rank these deferral opportunities from the perspective of attractiveness to third parties to offer competitive solutions to defer traditional investments: •Cost Effectiveness- The cost effectiveness metric evaluates Locational Net Benefit Analysis (LNBA) values in MW and in MWh. The LNBA in MW considers the capacity need to defer a Candidate Deferral project while the LNBA in MWh considers the energy need to defer a Candidate Deferral project. Projects with higher LNBA values are scored higher than projects with lower LNBA values. This metric serves as an input to the overall project prioritization and is not intended to inform the deferral value. •Forecast Certainty- The forecast certainty metric evaluates the likelihood that the load growth driving a grid need will materialize and the year the need first occurs. Projects with nearer term needs are scored higher than projects with longer term needs. Projects with higher likelihood of the load growth driving the need are scored higher than projects with lower likelihood of the load growth. •Market Assessment- The market assessment metric evaluates the duration of a grid need and the grid need(s) in a given geographical area which is approximated by the number of circuits that can utilize DERs to mitigate the project needs. Projects with shorter duration of grid needs are scored higher than projects with longer duration of grid needs. Projects with smaller grid needs in a given area are scored higher than projects with larger grid needs in a given area.	The ASP C/B method metrics are focused on measuring the effectiveness of various project alternatives in addressing project needs (capacity, reliability, and resiliency), whereas the DIDF metrics are designed with a different purpose in mind - specifically to rank the attractiveness of projects to third parties to offer deferral solutions. While capacity, voltage support, reliability (back-tie) and/or resiliency (microgrid) needs are required to be addressed in NWA solutions that are solicited, the DIDF metrics focus on the capacity required to meet one or more of those services. Meeting one or more services with a NWA is essentially how the NWA capacity is utilized for operations. However, services beyond supplying capacity under normal operating conditions is difficult to address via NWAs at the subtransmission level due to the size of the system (see system planning level above).

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Monetization	Avoided customer costs of service interruptions.	Avoided customer costs due to cheaper solutions to meet the grid needs.	The ASP licensing method monetizes its benefit metrics as a function of the value of service (or lack thereof) to the customer, which provides a direct comparison of what the customer "will get" for what the customer "will pay." The DIDF process considers only the decrease in customer cost, but not in direct comparison to what the customer receives in return.
Costs/DER Revenue	Costs reflect Present Value Revenue Requirement (PVRR) - rate impact to customers. Discount rate applied in PVRR analysis is applied to both costs and benefits so long-term benefits and costs are appropriately discounted. Market revenue of DER solution elements are estimated and included to offset project costs.	Cost effectiveness cap for evaluating DER solutions is calculated using the RECC method, which compares the third party bid to the traditional wires solution.	At the time of analysis, the approach for determining both costs and market revenue are similar for the two methods. For DIDF, SCE evaluates third party bids compared to the annual deferral value of the traditional wires solution for which third parties receive an added benefit. Third party DER developers are responsible for estimating profits through market participation.
Investment Deferral Consideration	Initial solution to address reliability need inherently satisfies capacity need for period of time. Incremental capacity additions are installed as needed in 5-year increments.	Cost effective solutions that can meet all the needs at each targeted location in the deferral time frame, which can be from 1 year to the end of the 10 year planning horizon, based on the cost effectiveness cap.	Both methods allow for consideration of value associated with investment deferral. For the ASP licensing method, deferral value is considered through the potential to defer subsequent investments for incremental capacity solutions after the initial reliability and capacity needs are met. The DIDF process requires that investment deferral be considered at the onset of the project.

Note:

1. Pros and Cons are stated where applicable. In many cases, the fundamental difference in purpose of the two methods precludes characterizing one approach as having advantages or disadvantages relative to the other.