COMMENTS OF THE LARGE-SCALE SOLAR ASSOCIATION TO DEPARTMENT OF ENERGY'S RAPID RESPONSE TEAM FOR TRANSMISSION'S REQUEST FOR INFORMATION

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The Large-scale Solar Association appreciates this opportunity to respond to the Department of Energy's (DOE) Rapid Response Team for Transmission's (RRTT) Request for Information.[1] We applaud the DOE for creating the RRTT and continuing to advance the efforts already made under the Memorandum of Understanding (MOU) entered into by nine Federal agencies in 2009 to expedite electric transmission construction. We also applaud the federal and state agencies that have expanded the Renewable Energy Policy Group and the Renewable Energy Action Team in California to focus on transmission, and hope that the tremendous success those efforts have had for generation permitting can be duplicated for transmission in California. We look forward to continuing to work with RRTT in the future and hope that our input will help the RRTT succeed in its mission "to improve the overall quality and timeliness of electric transmission infrastructure permitting, review, and consultation by the Federal government on both Federal and non-Federal lands . . . ."[2]

(1) The development timelines for generation and attendant transmission are often not coordinated or run concurrently. Because of the lengthy time to obtain regulatory reviews, permits and approvals (collectively ''Regulatory Permits''), major new transmission lines can take significantly longer to develop than some types of generation to which the transmission would connect. This Request for Information will refer to the difference in development times between generation and transmission as ''Incongruent Development Times.'' Please answer the following :

a. Describe the challenges created both by the timeline for obtaining Regulatory Permits for transmission and by the Incongruent Development Times.

Numerous challenges are created because of the Incongruent Development Times, or the significant mismatch between transmission project and generation project lead times. A generation project generally can be permitted and constructed in 2-4 years, while transmission project planning, permitting and construction takes between 7-10 years – even though transmission construction itself generally takes only 2-3 years. In fact, some independent system operators have transmission study processes that alone take over two years. This means that the design, permitting and construction of these transmission projects don't even begin until more

[1] Notice of the Department of Energy, Rapid Response Transmission Team Request for Information, 77 Fed. Reg. 11517 (February, 27, 2012); *see* https://www.federalregister.gov/articles/2012/02/27/2012-4464/rapid-response-team-for-transmission#p-15.

[2] *Id.*

than two years after a generation developer has placed its generation project in the interconnection queue.

This mismatch creates the fundamental "chicken and the egg" problem, as well as a vicious cycle of uncertainty for both renewable developers and transmission planners and owners. While transmission is planned based on the location of the generation development, renewable generation developers are forced to apply for interconnection prior to obtaining power purchase agreements or major permits for their projects - and before they know whether the necessary transmission will ever materialize. Often this requires renewable energy developers to seek interconnection for numerous projects (thus leading to the "queue clogging" problem) before they know whether those projects are commercially viable. This, in turn, leads to over-planning of the transmission system, which leads to significant uncertainty about whether the planned transmission will proceed and, even where the transmission does move forward, significant uncertainty about the timing and costs of transmission.

Renewable development costs are substantial, although in the aggregate they are only a fraction of the cost of new generation. Any invested dollars in renewable projects that must sit on the sidelines while transmission is being constructed decreases the rate of return on the project and increases the developers' cost of capital, which results in an overall increase of energy costs to ratepayers. In many regions of the country, transmission simply is not being planned, permitted, or constructed in a timely fashion. For example, most of the "backbone" transmission lines needed to meet California's renewable energy goals are not slated to be in service until 2017 or 2018, almost ten years after some of these lines were first identified.

Even more detrimental from a financing perspective is the lack of certainty regarding a transmission permitting and construction schedule. In other words, renewable developers have no assurances that the necessary transmission will actually be there when promised. Before a renewable generation project can be financed, the developer must attain some level of certainty that sufficient capacity and the transmission infrastructure "will be there" to support its generation projects. But in many cases, the timeframe for when the transmission will be complete is ambiguous and/or uncertain. In some extreme cases, the regulatory permitting process creates imminent risk that future transmission upgrades may be denied, resulting in a revision of scope, or the in-service dates of these upgrades.

For example, one transmission project in California was (1) identified as necessary to meet California's renewable goals, (2) included in a generator interconnection agreement (GIA), and (3) granted 100% abandoned plant treatment by the Federal Energy Regulatory Commission (FERC), after the constructing utility applied for such treatment. After several years of being included in the base case for the statewide transmission plan, the independent system operator recently announced that the transmission project is no longer going to be included in the transmission plan and is not likely to be constructed, despite other developers' reasonable reliance that the line would be built.

The independent study operator's rationale for removing the line from the transmission plan was that, in its judgment, based on publicly available information, generation was not likely to be developed in the area; however, the generation project that triggered this upgrade has a valid, albeit suspended, GIA, and there is other generation, with power purchase agreements, in the interconnection queue that also rely on these upgrades. While the independent system operator stated that the transmission project might move forward if and when the generation project triggering this transmission line moves forward, this will nonetheless further delay the on-line date of this transmission line, adversely impacting the generation projects that have relied on this line being built. These types of *ad hoc* judgments and mid-game rule changes have a drastic economic impact on generation developers, and ultimately raise the overall cost of renewable energy.

Delays in development and construction of needed transmission upgrades not only increase the chance of failure of the associated viable generation projects, but also increase the chance that such generation projects would have their output curtailed to maintain reliability, even after they come on line. This turn of events can also cause the load serving entities to over-procure generation in anticipation of failure or curtailment, which further increases the cost to customers. If load serving entities could rely on the needed transmission upgrades to be completed in a timely manner, over-procurement to address curtailment risk would not be required.

Finally, under FERC's current interconnection rules, there is almost no recourse for a developer if the utility does not construct transmission facilities on time. The interconnection agreements only require the utility to use "reasonable efforts," and liquidated damages are either non-existent or minimal, depending on the circumstance. Even where reasonable efforts are made, transmission build-out is often severely delayed during the permitting and construction processes because of inadequate coordination among the various agencies, unclear rules and regulations, and lawsuits based on inadequate decision making of the various agencies.

b. To what extent do the Incongruent Development Timelines hamper transmission and/or generation infrastructure development?

As described above, Incongruent Development Timelines hamper both transmission and generation infrastructure development primarily due to the "chicken and the egg" problem. Because of the Incongruent Development Timelines, transmission must be planned and often permitted before the associated generation projects have begun construction. The inability to know which generation projects will actually be constructed (i.e., those that successfully make it through both permitting and procurement efforts) can cause the transmission construction to be riskier. However, for renewable energy projects such as solar, the value of the resource area and the availability of transmission essentially eliminate the risk that transmission to an area with high solar potential will go underutilized. At the same time, though, the inability of developers

to know when transmission will be available may eliminate the ability of some otherwise viable (and perhaps more cost-effective and reliable) projects to compete in the marketplace.

In order to rectify this issue, large transmission infrastructure projects must be planned, permitted and constructed in a timely fashion, in areas where renewable generation can develop. Rather than planning on a generator-by-generator basis, where the planned transmission is dependent on a particular renewable generation project succeeding, transmission planning must be done on a more holistic basis. Moreover, once a transmission project is planned to a renewable resource area, it must be permitted and constructed in a relatively quick timeframe, consistent with federal policies and incentives, so that renewable developers can rely on the transmission line being in service when it's needed. In order to speed up timelines, there should be better coordination among the relevant permitting agencies during the planning and permitting period.

c. What are the primary risks associated with developing transmission vis-à-vis the timeline for obtaining Regulatory Permits as well as the Incongruent Development Times?

The primary risk with developing transmission vis-à-vis the Regulatory Permits' timeline and the Incongruent Development Timelines boils down abandonment risk due to failure to obtain permits and/or insufficient generation materializing. If a planned transmission project must be cancelled, or if the project is underutilized because insufficient generation materializes, then either the utilities, or more likely, the ratepayers, may be required to absorb the already-incurred costs for little or no benefit. These risks, while always present, are exacerbated due to the Incongruent Development Timelines, and, in particular, the lengthy development and construction period for electric transmission lines. As discussed above, however, transmission to high-value solar resource areas is highly unlikely to be left underutilized.

While the risk of abandonment should not be ignored, inaction – or failure to timely build sufficient transmission – has even more costly risks, particularly with respect to transmission serving high-value solar areas. In our view, the risk of not developing sufficient transmission to foster competitive markets is far greater than the risk that a well-planned transmission project will be abandoned. This is particularly true if the relevant agencies coordinate early on in the planning process, which will mitigate the risk that a transmission project will not be able to obtain the required permits. On the other hand, if there is insufficient transmission, markets cannot function effectively, and energy costs may increase significantly for all ratepayers. Moreover, without sufficient transmission, states will not be able to meet their renewable energy goals without increasing reliability risk, over-procuring in anticipation of curtailments, and/or buying potentially more expensive resources, which will also increase overall energy costs.

d. How is the financing for developing the attendant transmission influenced by its lengthy development time and by the Dissonant Development Times?

Although financing may be more difficult due to lengthy development timelines, Congress and FERC have largely resolved those issues by allowing financial incentives for transmission projects that face increased risk. For example, utilities and non-utility transmission owners can apply to FERC – and FERC routinely grants – incentives such as return on equity adders; accelerated depreciation; 100% recovery for abandonment, if such abandonment is beyond the control of the utility; and recovery for construction work in progress. All of these financial incentives have helped to ameliorate financing risks for transmission projects, and we support continuing these incentives.

However, where FERC has granted these incentives, the transmission owner should have a commensurate responsibility to actively proceed with the permitting and construction of transmission projects in accordance with a pre-defined schedule. Currently, there is very little oversight on transmission providers that have committed to build transmission, and, in at least some cases, the transmission providers are not moving forward at a reasonable pace to seek permitting and construction of approved projects. The RRTT should consider working with FERC to determine whether there are any mechanisms to remedy this problem, such as providing transmission incentives only where the transmission developer commits to a reasonable timeline for development and construction. Then, in order to retain the incentives, the transmission developer should be required to proceed in accordance with that timeline, unless it can demonstrate that it could not reasonably do so. FERC, or another appropriate agency, could establish a tracking system to ensure that utility permitting and construction timelines are being met. Where those timelines are not being met, the agency could constructively work with the transmission owner to identify and overcome barriers to meeting those timelines.

e. How, if at all, do development timelines and the Incongruent Development Times affect the decisions made in utilities' integrated resource planning, if applicable?

See (f) below.

f. How do development timelines and the Incongruent Development Times affect the ability of parties to enter into open seasons or power-purchase agreements?

Generally, in the negotiation of power purchase agreements (PPAs), at least some or all of the transmission risk is borne by the generator, even though often the same utility is both negotiating the PPA and constructing the necessary transmission for the generation project. Because GIAs have limited or no damage provisions for transmission delays, there is always a risk that the transmission will not be constructed on time.

Moreover, if a renewable generation developer does not agree with the time estimate provided by the incumbent transmission owner, it has little or no recourse to force the utility to accelerate those time lines. And often there is no opportunity for a third party to construct the required transmission facilities.[3] Although PPAs may have provisions to excuse some transmission delay, those excuses are finite, and, as stated earlier, there are no penalties to the transmission owner for failure to timely perform under the GIAs. These are important issues for renewable energy developers, who believe that the risk of transmission delays should be borne by the entity that has control over the construction of the transmission.

(2) Besides improving the efficiency of permitting and approving transmission, are there any other steps the federal government could take to eliminate the barriers created by the Dissonant Development Times?

As noted above, we applaud the federal government's efforts in this area, particularly the execution of the MOU and the creation of the RRTT. The most important goal is for the government to accelerate the timing of permitting and approving transmission through better coordination, increased oversight and transparency, and the issuance of enforceable timelines for permitting and approval of transmission. However, there are still a number of other helpful actions that the federal government could take to eliminate some of the barriers created by Incongruent Development Timelines.

First, the government could foster competition among transmission providers by allowing third-party providers to earn a rate-based return (including incentives) and truly compete with the incumbent utilities. This would drive down costs and accelerate the timing of construction and thus reduce the cost of renewable resources by increasing market efficiency. Such competition could be accomplished through further FERC rulemakings, in coordination with the other MOU signatories. Second, the government could increase incentives for multi-state, regional transmission projects. Third, the federal government should streamline its permitting processes for transmission that must go through federal environmental review.

One of the most important and effective measures that can be taken is to transparently track important transmission upgrades and new lines from the beginning of the planning process, through permitting and construction, and until the transmission line is placed into service. Schedules, with milestones, should be identified, corrective actions taken when milestones are not met, and the success of these corrective actions chronicled, with lessons learned and recommendations for improvement. This information should be made readily available to all stakeholders, so that issues and barriers to transmission development can be quickly identified

[3] Until recently, an interconnection customer generally could not build, or cause to be built, any network upgrade unless it did not electrically connect to any other portion of the grid. Not surprisingly, these facilities are rarely, if ever, identified. Even with FERC Order No. 1000, which has not be implemented, the incumbent transmission owner will still have the right to build many network upgrades, with no commensurate obligation – other than "reasonable efforts" – to meet estimated timelines for permitting and construction.

and resolved, and that successful approaches on one project can be more readily adopted for others. The blame for the significant delays associated with transmission are anecdotally spread widely, but a systematic approach to tracking the development of important transmission upgrades and new lines will clearly identify where the real problems lie, and what solutions are necessary to overcome them.

We also support the federal government's effort to define and utilize national interest electric transmission corridors (NIETC). The federal government should allow projects within NIETC corridors to go through an accelerated permitting process, and should hold an open season to allow these corridors to be used by the entities that can construct transmission lines at the least cost and provide the greatest benefit.

(3) What strategies can the Federal government take to decrease the time that Federal agencies require for evaluating Regulatory Permits for transmission? What other steps can the Federal government take to address the challenges created by Incongruent Development Times?

As part of the tracking system discussed above, the Federal government should implement a system for tracking progress in a transparent and objective way. The oversight to ensure that the project schedules are followed will also assist federal and state permitting agencies to work closely together to minimize duplication of efforts and required information. Moreover, the permitting process could be streamlined by reducing subjective requirements, clearly defining up-front all information required to make a decision, and then requiring agencies to act on the information provided in a timely manner.[4]

For example, the federal government could set enforceable and accelerated timelines for processing permit applications. This type of accelerated process has worked well in other contexts – e.g., with the Renewable Energy Policy Group and the Renewable Energy Action Team with respect to permitting certain renewable generation projects quickly to meet timelines for Recovery Act funding – and that model could be borrowed here. In order for this to work, however, the federal government would need cooperation by the state permitting agencies. Thus, it is also important for the federal government to work closely with the relevant state permitting agencies.

[4] By way of example, the federal government could define a "distance" criteria that is not subjective (i.e., for historic areas, five miles from national sites, three miles from State sites, one mile from previously identified private sites), so that transmission developers would have a clear idea of where they can locate and can find corridors that meet those objective criteria. If transmission developers meet these objective criteria, then the process should be streamlined and accelerated. For example, after meeting such criteria, a rebuttable presumption should attach and the burden of proof should shift to any opponents seeking to deny the project a permit.

(4) One way to make the Regulatory Permit process and development times between remote generation and attendant transmission more commensurate, is to decrease the time for permitting transmission by some amount. In determining how much time can be saved, developing a benchmark may be helpful. What benchmark should be used?

In selecting a benchmark, it would be best to determine what a reasonable or typical timeframe **should** be for permitting a section of a transmission line. Then the government should benchmark against that reasonable period of time and attempt to permit transmission projects in that timeframe. The permitting agencies should: 1) define the information required by the applicant; 2) make the information available for public comment to determine whether the required information is provided; 3) determine mitigation required (if any); and 4) make a decision on the permit.

This could be accomplished much more easily if the permitting agencies and other stakeholders are already involved in the transmission planning process. If transmission projects can be planned in areas with fewer environmental impacts and more community and agency support, then the permitting process should be able to proceed more quickly.

a. Example—power purchase agreements as the benchmark: how far in the future do load serving entities (LSE's) seek to purchase energy or capacity from remote resources? Do LSE's seek PPAs that begin delivering energy/capacity 3 years from the signing of the PPA? 7 years? 10 years? Please explain why PPA's are signed at this time.

b. Example—development times as the benchmark: How long does it take to design, permit and build different types of remote generation?

We do not believe it will be effective to benchmark against the time it takes to construct a renewable energy project nor against the timing of the execution of PPAs. As previously noted, it generally takes between one to four years to design, permit and construct utility-scale, remote solar generation projects. The government could use this timeframe as well as a benchmark for transmission permitting and construction, as it would be useful for the transmission and the renewable energy projects to be developed at the same time. On the other hand, a transmission project should not "live or die" by the success or failure of any one generation project. Rather, major transmission lines should be centrally planned in areas where generation is likely to develop, so that they will be used and useful whether or not a particular generation project succeeds.

(5) In your experience, how long does it take to design, permit and build transmission?

The timelines for designing, permitting and building transmission vary greatly, but the general timeframe is approximately seven years. If you include the time for planning the

transmission, the timeframe for getting a transmission project in service is typically from 7-10+ years. In our experience, the shortest is 18 months (Minnesota – upgrades to support renewable generation), and the longest is 30+ years (Wisconsin – Arrowsmith project).

(6) Assume that Federal, state, Tribal and local governments sought to set a goal for the length of time used for completing the Regulatory Permitting process for transmission projects so that the development times between generation and transmission were more commensurate, what goal should that be? As the length of the project and the number of governments with jurisdictions increase so will the time necessary for permitting and approvals; accordingly, consider providing a goal that could be scalable according to the length of the line.

LSA does not have a specific recommendation for the length of time that is reasonable for completing the Regulatory Permitting process, but may make some recommendations in the future. However, LSA notes that the transmission planning process, not just the permitting process, must be expedited and there should be increased coordination between the planning and permitting processes. By having wider stakeholder participation in the planning process – including the state and federal agencies that will be making the permitting decisions – more viable transmission projects are more likely to be included in the state and regional plans. Thus, better coordination in the planning phase can expedite permitting and construction of transmission projects.

We do not agree that a longer transmission line passing through more jurisdictions should take significantly longer to permit. Rather, the reason for consolidating and streamlining the process is so that the various local, state and federal agencies can share information, work concurrently, and avoid duplicative efforts. This should limit delays inherent in cross-agency communication, as well as save the resources of the individual agencies. Thus, any policies and procedures implemented to communicate information and coordinate efforts should function to avoid those potential delays to the maximum extent possible.

Respectfully Submitted,

___/s/ Shannon Eddy /s/_____
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