DEPARTMENT OF ENERGY

[OE Docket No. RRTT–IR–001]

Rapid Response Team for Transmission

AGENCY: Office of Electricity Delivery and Energy Reliability, Department of Energy, DoE.

ACTION: Request for information.

(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.(IDT)'' Please answer the following 1:

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

The 1st major challenge created is directly tied to the timing & availability of the financial investment resources required to site, permit and construct & commission the generation facility in-line with the 'major new transmission (MNT) being constructed and coming on-line. The 2nd major challenge is conveying a high level of certainty to the generation developer that the MNT will be constructed and come on-line within a reasonable fixed set of dates; thus giving the generation developer the 'comfort' required to take the financial risk to start the siting & permitting processes. Essentially it is a coordination challenge of certainty between two different business models, the electric utility business model and the private generation developer business model. Electric utilities and generation developers have two very different financial models.

The timeline to develop MNT lines from the beginning of permitting through to construction is between 8 to 10 years. The development of Large Transmission, which is mostly funded by the electric utilities, is based on internal financial models that weigh the 'cost benefit' of construction balanced with the supply & demand component. 'Cost benefit' over the timeline to develop MNT lines, (8 to 10 years) can/will fluctuate based on market prices for electricity, the availability and cost of fuels used to generate electricity, future legislation and possible advances in renewable technologies, specifically solar PV & energy storage.

Generation Developers or Renewable Generation Developers are mostly supported by the private financial investment community. There are a small number of renewable generation developers that have been established over a 20 year or even 30 year timeline. Most of these established renewable developers have come out of the wind generation business. These companies are dependent on 'annual project pipelines' that deliver projects to the off-taker/electric utility - on a consistent annual basis. Due to the high at-risk expense and regulatory uncertainty in permitting and interconnecting 'renewable' generation – The majority of 'renewable' developers do not have 'Project pipelines' that anticipate the final permitting or construction of MNT Projects.

Most traditional & renewable generation developers will only begin siting & permitting generation for MNT's when the MNT has reached late stage permitting or has commenced construction. The challenge then, in most cases is the siting of the generation project in a proximity to the transmission which is **cost feasible**. Historically, generation corridors/zones have not been a part of the planning process parallel to the planning of transmission corridors.

b. *To what extent do the Incongruent Development Times (IDT) hamper transmission and/or generation infrastructure development?*

Logically, transmission infrastructure must precede generation infrastructure. Therefore the development of generation projects will always follow the construction of

transmission infrastructure. The ultimate danger in IDT's is having a MNT permitted or constructed that is in-accessible to energy generation developers. If the generation corridors / generation tie-line corridors, are not planned in concurrence with the permitted transmission corridors, negative changes in regulatory environments and negative market influences deter generation developers from pursuing development in these areas. This precedent is both historical and presently in-play.

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

The primary risk is the effect of uncertainty. Most of our modern planning processes rely on historical data and trends to project future needs. The timeline to obtain Regulatory Permits (8 – 10 years) is simply not on pace to compete with the influencing factors that introduce risk to the MNT planning process. As mentioned above, 'Cost benefit' is subject to fluctuating market prices for electricity, the availability and cost of fuels used to generate electricity, future legislation and advances in renewable technologies. To compound this, if there is no concurrent planning for generation to accompany the transmission, it can be anticipated that the regulatory environment when the MNT is in final stages of permitting (8-10 years) will be ever more lengthy and complex – thus hindering the financial feasibility of generation projects.

Based on current trends in the industry, the generation developer is experiencing a significant downward trend on PPA prices coupled with higher costs for regulatory permitting, mitigation and interconnection. The decrease in equipment costs, either renewable or traditional, that the industry has realized has not maintained pace with the downward pressure of development costs. Current legislation and future legislation that influence technology subsidies, carbon emissions and renewable portfolio standards will have a significant impact on the financial feasibility of utility scale generation at the end of the MNT timeline.

The primary risk of uncertainty that is introduced with extensive permitting timelines and arduous regulatory processes for MNT's, produces a 'wait & see'/ non-committal strategy in both the electric utility's and the generation developer's business models. The ultimate sum of this strategy is that the uncertainty risk is then absorbed by the governmental agencies and participating planning groups which expend significant amounts of resources on developments that may never come to fruition or only be partially effective.

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

Development costs associated with transmission, which generally include siting & regulatory permitting are performed by internal balance sheet budgets and have milestones in which the risk and the 'cost benefit' can be systematically analyzed to determine if further expenditures will be devoted to a project or if the project should just be 'put-on-hold'.

Financing is generally brought to the forefront when a project is in late stage permitting, construction of the project is imminent and the project risk has been minimized to a financeable level.

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

Again, this is a 'cost benefit' analysis. A longer development timeline is equal to a higher risk of bringing a project to market. Ultimately, the further out a project is projected to be constructed – the more the project is deemed a "projection" as opposed to a fixed solution. The IDT's for generation development are, in most cases of early project permitting, deemed irrelevant because the interest from the generation developers to develop a generation asset is based on the certainty that a MNT will in fact be constructed. In can be assumed that a majority of MNT's must 'stand-on-their own' with a large percentage of intrinsic value prior to the electric utility progressing a project to late-stage permitting.

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

It depends on the PPA and the purpose a PPA is written to serve. A PPA attempts to construct a mechanism that facilitates an exchange of energy for monetary compensation. Within this mechanism, it attempts to define the inherent liabilities associated with this mechanism and mitigate the liabilities for both the developer and the electric utility.

That being the case, a PPA that allows the electric utility to assume a large portion of risk associated with the development of an MNT and the regulatory permitting associated with a future generation project – may be an attractive PPA for a generation developer to sign. However, both parties will fully understand the uncertainties in the PPA and make progress towards their obligations accordingly. A PPA can be entered into at any time and as has historically been shown, be cancelled on the mutual agreement of both parties without a generation asset ever being constructed. A majority of early PPA's signed by both the developers and the electric utilities in the Southwest over the past decade have been cancelled. A buildable, financeable PPA that truly anticipates the construction of an asset by both parties involved will only be executed when the uncertainty of the construction of an MNT or any transmission reaches a low percentage.

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

When developing transmission corridors it would be appropriate to also designate generation corridors / zones either along the TM corridor or at intermittent points or end points along the corridor. Regulatory permitting is one of the bigger uncertainties associated with generation development. Planning for generation when planning for transmission is essential to making the MNT a 'real' project.

Open forums between the electric utility and the generation development community that focuses on the financial feasibility, projected generation quantities and realistic siting areas throughout the process will add to the solidarity of the project for both parties involved.

Milestones along the permitting process that are similar in nature to what the transmission system operators have put in place using 'financial postings' can demonstrate to the development community the commitment that the electric utility is placing on an MNT project.

(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?

The strategy can be summed in four words – communication, coordination, commitment and accountability.

Communication has to happen early in the process and needs to take place with all of the agency stakeholders actively participating – including the MNT developer. From that point, communication as an agency stakeholder group must be initiated with the community stakeholders, NGO's, tribes, etc. and this must be done in a single united, organized forum. Upon receiving feedback from the community stakeholders – the agency stakeholders must then formalize a plan of action to move forward with the permitting process and present this to the MNT developer, again as one united forum. This may seem, 'high in the sky' – but the current process is beleaguered by miscommunication, absent communication, conflict of mandates, lack of good information from the MNT developer and a lack of leadership in communication from any one party. The communication breakdown internal to the agency/developer stakeholder is then further compounded by the external miscommunications with the community stakeholders/NGO's/Tribes, etc.

There should be one lead agency that coordinates the communication among all of the federal agencies. Communication from agency to agency should openly discuss legitimate project concerns followed by legitimate project solutions. Communication without this component is inefficient. Communication with agency staff that is not capable or empowered to make a decision with commitment is also ineffective and inefficient.

Both the developer and the agencies need to share a high level of accountability in following through with their given responsibilities. If accountability on either side is lacking, it slows the process, breeds inefficient communication and ultimately leads to frustration on both sides.

This can be avoided by clear and coordinated project management direction from the beginning of project. The lead agency would focus on building a project management timeline that incorporates the timelines and processes from all the other agencies within it. This project management timeline would be used as a tool throughout the permitting process to keep the applicant and participating agencies on schedule to their commitments. Points of Communication within this project management timeline to reach out to the community stakeholders, NGO's, tribes, etc. would be inserted and strictly adhered to. These Points of Communication would be inclusive of the applicant's requirements to reach out to these community stakeholders on a regular basis and apprise the Agency Stakeholders of ongoing sentiment.

It would help the Federal Government to involve members and consultants from within the private industry to assist in managing project timelines, communicating applicant concerns and assisting the governmental agencies in understanding how the 'business' timeframes of the applicant are either driving or slowing the permitting timeframe. In short, it would benefit agency efficiency and resources to understand the industry's project business model and how that model will ultimately affect the certainty of the MNT project.

(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?

Decreasing the time for permitting transmission is not necessarily the single answer, although it would bring benefit to the generation developer. The answer lies in increasing the certainty of the project to the generation development community. Understanding the project timelines for Transmission and Generation can support the design of a process that brings this certainty.

Logically, if the Transmission Permitting timeline was scheduled to be completed at the same time the generation permitting was scheduled to be completed, this would be a win-win. Working backwards using the generation development timeline, siting and prospecting land for generation followed by due diligence requires approximately 2 years. Proceeding with the regulatory permit and finalizing the permit for the generation project, depending on the size and type of project is between 1 and 3 years. The development process from when siting begins, to having an approved permit for construction, takes approximately 3 to 5 years.

Currently, siting for generation does not begin until the late stage of MNT permitting and or pre-construction activities begin. The benchmark timeline for the project should be based on the individual MNT project purpose & need to a reasonable degree. The coordination of this timeline and the type of planning associated with transmission should be improved. Planning initially & early in the process should define the generation zones / corridors & interconnection points proposed along the linear path of the MNT. Coordination should then take place in the early stages to solicit feedback and comments from the generation development community to start the siting and due diligence processes for generation development. From that point forward, it would be anticipated that the permitting process for the MNT correlate with the permitting process for generation development.

In siting Transmission, depending on the linear size and character, due diligence may be a 2 to 3 year process, prior to commencing with permitting. Logically, if permitting for transmission was an approximate 6 year permitting process, it could allowably coordinate and bring certainty to the generation development community that the transmission permitting process would be completed in parallel to the generation permitting process.

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.*

PPA's are not a relevant benchmark. PPA's are executed based on the dynamic requirements of an electric utility's energy portfolio as that portfolio reacts to all of the external influences, legislative, emissions, cost of fuel, projected costs of fuel coupled with supply and demand. Again, as noted in a previous comment, it depends on the PPA and the purpose it is written to serve.

It seems, particular to California Utilities, that they sign hard PPA's for power delivery approximately 4 years out. Of these PPA's, there is a percentage that will never be delivered – thus there is an infill of project PPA's executed by developers, that have 'at risk' completed the development process to a point where the certainty of the project is at a viable level. This takes place, in most cases, in geographic areas where transmission is available and project deliverability is feasible through existing or ongoing transmission upgrades. The utilities strategically & politically may have motivation to execute a PPA for a variety of reasons.

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

It is dependent on if there is a generation tie-line and or where the Point of Interconnection is for a project. Typically for NG, Wind & Solar the process is between 2 to 6 years.

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

8 to 10 Years – If not longer. Rarely shorter.

(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.

There are 4 areas in which the timeline for MNT's can be improved and coordinated:

As mentioned above a set length of time may not be the answer. Establishing communication protocols, coordination processes and project timelines that are pragmatic/financially feasible early in the process will seek efficiencies in the system and should logically reduce the project timelines. All stakeholders, including the generation developers need to have an understanding and awareness of the project timeline.

Adding a level of commitment and accountability to the agency stakeholders along with consistent policy support will also add efficiencies to the timeline.

Incorporating Project Management techniques that build an entire permitting process from the many agency processes, early in the permitting process, will more efficiently define the Project Timeline. A lead agency that responsibly oversees this Project Management role can help ensure that the timeline does not expand. The roles and tasks of the applicant in this timeline must be clearly defined and assigned when the permitting process begins.

The important aspect of the timeline is that it should meet the purpose and need of the MNT project and should be deemed a viable timeline by both the regional electric

planning groups and the electric utility. Second, the timeline should incorporate outreach to the generation developers early in the process to provide feedback on the viability of generation interconnection along the MNT and timing for development from their market prospective. Early coordination & outreach with the generation developers is essential to raise the level of certainty of the MNT and close the gap of IDT's.