

## **RESPONSE TO RESOURCE PLANNING QUESTIONS SUBMITTED TO TRI-STATE**

July 1, 2010

To Bruce Driver, Lawyer and Consultant, representing Western Resource Advocates  
From Fred Stoffel, Tri-State Generation and Transmission Association  
Subject: WRA Modeling Memo Dated June 8, 2010

On June 8, 2010, Tri-State received, via email, a Memo ([WRA Memo](#)) concerning various aspects of the resource scenario modeling that Tri-State is performing with respect to its long term resource planning. The WRA Memo described the characteristics of a so-called WRA Data Case (WRADC) and detailed numerous alternative expansion scenarios that were based on the WRADC. The WRA Memo was a follow-up to a face-to-face meeting Tri-State (Rob Wolaver, Kevin Cox and Fred Stoffel) had with WRA (Bruce Driver and Jennifer McDiarmid) on June 4, 2010. A second face-to-face meeting including the same individuals was held on June 16, 2010.

On June 10, 2010, at its fourth Public Participation Meeting, Tri-State presented the modeling assumptions and the preliminary results of 10 alternative expansion scenarios. In addition, Tri-State outlined the assumptions and characteristics of 10 more scenarios that Tri-State intends to model. The first of these additional scenarios includes the specific changes proposed in the WRADC (lower natural gas prices, higher prices for CO<sub>2</sub>, lower prices for single-cycle and combined-cycle generation alternatives). The second additional scenario will use the higher cost CO<sub>2</sub> and escalation factor that WRA has proposed. Although the other scenarios Tri-State was intending to model were not going to be based off of the WRADC (but instead would use Tri-State's Base Default Case), they were intended to be responsive to many of the suggestions of participants to the public process. Thus, Tri-State planned to model: alternative renewable resource approaches to meeting the Governor's Climate Action Plan (instead of using only wind energy), increased levels of DSM (50% and 100% of incremental costs), and increased levels of Geothermal energy and Distributed Generation. Tri-State also planned to model three alternative expansion plans designated as "PPP Scenario 1," "PPP Scenario 2," and "PPP Scenario 3" that combine various issues and values. These scenarios combined high levels of renewable resources, high levels of DSM, high CO<sub>2</sub> costs, low natural gas costs and high coal costs.

At the June 16<sup>th</sup> meeting, WRA reiterated its request that Tri-State model numerous alternatives predicated on the WRA Data Case. The fundamental reason behind WRA's request is its belief that the \$20 per ton carbon value that Tri-State is using in its Base Default Case is too low; particularly if only escalated at the rate of inflation. In addition to the 1) WRADC and 2) WRADC with High CO<sub>2</sub> cost scenarios that Tri-State has agreed to model, WRA requested that Tri-State model: 3) WRADC with Max DSM, 4) WRADC with Max DSM with High CO<sub>2</sub>, 5) WRADC with High Renewables, 6) WRADC with High Renewables and High CO<sub>2</sub>, 7) WRADC with High Renewables and Max DSM, and 8) WRADC with High

Renewables, High CO<sub>2</sub> and Max DSM. WRA requested that Tri-State also consider two additional scenarios suggested by Clean Energy Action and SWEEP: 1) WRADC with a coal cost that is higher than Tri-State's high coal case, and 2) WRADC with a DSM cost that is two-thirds of the costs set forth in the Nexant Study.

Tri-State appreciates WRA's recommendations and recognizes WRA's desire to analyze the results of modeling many alternative resource expansion models. Given its limited time and resources, Tri-State is not able to model all of the requested alternatives. Tri-State will model seven of the eight scenarios discussed on June 16<sup>th</sup>. Tri-State will not model the High Renewables, High CO<sub>2</sub> scenario. As discussed at the meeting, Tri-State believes it is very unlikely that simultaneous mandatory high renewable portfolio standards and high CO<sub>2</sub> taxes will be imposed. High CO<sub>2</sub> taxes should themselves lead to the development of renewable alternatives. Tri-State also declines to run the two cases suggested by Clean Energy Action and SWEEP. Tri-State believes, in view of its existing coal contracts, that its high coal cost scenario already provides a realistic boundary case. In addition, the DSM costs included in the modeled scenarios were properly vetted in the final review of the Nexant study, so there is no reason to run an additional DSM boundary case.

Tri-State believes the assumptions it used in its basic modeling are fairly researched and documented representations of anticipated costs. The substitution of lower natural gas costs, higher carbon costs and lower capital costs for natural gas turbine and combined cycle generation to construct the WRADC is Tri-State's accommodation to the views of the members of the public that by and large represent environmental interests. Tri-State doubts the likelihood of the imposition of the high CO<sub>2</sub> cost scenario and the feasibility of implementing high levels of DSM measures.