

Western Interstate Energy Board Webcast

July 6, 2004

Meeting Notes

Attendees

Doug Larson, WIEB
Alison Wilson, WIEB
William Mackie, WGA
Aubrey Godwin, AZ
Rich Baker, AZ
Toby Morales, AZ
Barbara Byron, CA
Tammy Ottmer, CO
Joe Strolin, NV
Bob Halsted, NV
Fred Dilger, NV
Ken Niles, OR
Scott Ramsay, WY

Nancy Slater-Thompson, DOE-ONT
Judith Holm, DOE-ONT
Teal Carlock, DOE-ONT
Dean Jones, SNL
Ken Sorenson, SNL
Glen Harrison, ORNL
Paul Singly, ORNL
Julie Offner, BAH
Steve Loftus, BAH
Chris Hanson, BAH
Ronald Ross, BSC

ONT Presentation Slides

Opening remarks and introductions were made by Doug Larson, Western Interstate Energy Board (WIEB), and Nancy Slater-Thompson, DOE - Office of National Transportation (ONT).

Introductory slides are attached.

Questions on ONT Introductory Briefing

Question: What are the assumptions on turn-around times?

Response: Times will vary by utility and DOE facility. For initial planning purposes ONT is using:

Seven day trip from the FMF to the utility,
Three days for loading a cask at the utility,
Seven days from the utility to the repository,
Seven days to unload a cask at the repository, and
Five days from the repository to the FMF (including maintenance and shipment preparation).

Presentation on the Investment Planning Model by Sandia National Laboratory

Presentation slides are attached.

Questions on the IPM Briefing

Question: Is the model to result in a planning tool to assist DOE in making decisions, or does it provide another way to interact with the waste program?

Response: The model is to help focus the decision-makers on those key policy decisions that need to be made.

Question: Several concerns were expressed about the current assumptions in the model and its seeming focus on minor changes to the system.

Response: The model is not wired for any particular set of assumptions - rather it allows the user to change many of the variables in the transportation system to define and evaluate different scenarios. The model is open-ended and nothing is locked in.

Question: Concerns were expressed that the current assumptions about selected transportation policies might lead to overly optimistic results and bad investment decisions. Six concerns were stated.

1. Does the model consider the availability of rail access to the repository – and the date of availability? Does the model consider an all-legal weight truck scenario? Can the model compare the all-legal weight truck scenario to one that uses LWT casks on railcars with an intermodal transfer to move the casks to the repository?

Response: The model is flexible and will allow the user to vary these factors.

2. Does the model allow the user to define the order of shipment and characteristics of the fuel to be shipped - the fear is that DOE has acquiesced to the utilities' position on the standard contract for shipping order.

Response: The preference of the shipping sites can be adjusted. The model considers these adjustments within the total system capabilities to optimize shipping and the needed capital investment.

3. What does the model do with regard to the use of dedicated trains for rail service? There is a fear that the transportation system cannot be modeled without using the assumption that dedicated trains will be used.

Response: The model is flexible and allows the user to vary mode and level of service.

4. What are the assumptions made on representative truck casks? It is tricky since there are no available high capacity truck casks, with specific reference to the GA 4/9. Is there a production factor included in the model?

Response: At this time a generic truck case is being described for model validation. The model has the capability to factor in production time as part of the cask procurement process.

5. It was noted that the GA 9 is heavier than the NAC LWT cask and would require dedicated trailers and tractors. What are the effects on operations and timing – e.g. 100 gallon fuel tanks require more frequent stops?

Response: This is an operations level question and will be considered as part of the operations planning and management modules. From an investment planning perspective, the increased transit time associated with any given route or transportation mode can be considered by the model, if the supporting data is made available.

6. Is DOE considering a suggestion being made by some industry representatives that DOE bypass the US cask procurement requirements and order European manufactured casks?

Response: The NWPA requires that all casks be certified by the Nuclear Regulatory Commission. Although this factor is not part of the modeling software, the Department's policy is that all casks will be NRC certified.

Question: Overall, doesn't DOE need to address a lot of the open policy questions before it can accurately model the transportation system? Does DOE need to figure out how procedurally you are going to take input from your stakeholders.

Response: One of the objectives for the modeling process is to test policy options, as well as investment and technical scenarios.

ONT will use all of the communications processes to facilitate its interactions with its stakeholders. This includes the state regional groups, TEC, e-mails and webcasts like this one.

Question: Does the model have the capability to simulate a delay in the availability of rail?

Response: Yes - see the response to concern 1 above.

Question: It is important to consider a scenario that addresses a delay in the availability of rail access. Will DOE go to the Rail-LWT / intermodal option, if so then DOE should do a point-by-point comparison of this with the all-LWT scenario and look at the impact on procurement strategy.

Response: The model can evaluate both sets of scenarios and the affects on procurement strategies.

Question: Can the user change the order of pick-up or the mode available at a reactor?

Response: The model provides the ability to set a preference for site pick-up. Since numerous other constraints are simultaneously considered by the model, this preference does not guarantee that a given site will be selected for pick-up over another. The mode of transportation is a user-selected parameter by reactor site.

Question: DOE should have some "reasonability criteria" by which it will approve exchanges between utilities. The system has to be constrained some how or else you can't plan for the system.

Response: The model is capable of inputting position cues for the sites and can test them as part of its evaluation of the affects on the overall investment strategy.

Comment: Dominion wants to buy Kewanee. The utility ownership scheme is even more complicated today than before.

Question: How will SNL/DOE do model validation?

Response: The validation process consists of several steps corresponding with the major portions of the model:

Data: All core data elements used by the model will be obtained from the best known available sources. These sources, along with the manipulation performed on the data for use by the model, will be documented and provided for review.

Model Formulation: The nature of this modeling technique results in a closed-form, analytic representation, that can be written in mathematical terms. The formulation will be reviewed by a professional modeler outside the development team who is an acknowledged expert in this form of modeling. A formulation document, as well as a report from the 3rd party reviewer, will be provided.

Implementation: The implementation phase of the effort, which includes database, application code and interface development will be assessed through extensive Sandia design reviews, as well as design reviews by ONT. The architecture, data structures and code procedures will be documented and provided for review.

Question: How are the model's results to be presented? How will scenarios that fall outside of the current parameters be treated?

Response: From a stakeholder's perspective, it is envisioned that the interface to the IPM will take the form a website using https: protocols. Model parameters will be made available to the user based on their user privileges. These privileges will be

determined by ONT, and enforced through secure usernames and passwords. The main result from the model will be displayed in tabular, as well as graphical format with particular emphasis on histograms. Additional model output will be provided to focus the decision maker's attention to the most important results.

Presentation on the TRAGIS Model by Oak Ridge National Laboratory

Presentation slides are attached.

Questions on TRAGIS Model

Question: The Trojan Reactor and Hanford site both with barge access. Why would DOE consider using barges from these sites?

Response: TRAGIS includes barges where they are an available alternative. It would be up to the policy maker or scenario builder to specify the use of barges for a specific site.

Question: How can the states obtain the LandScan database in order to run comparisons between the projected population numbers. There appears to be large difference between the LandScan and Census databases.

Response: ORNL stated that it would research the question and provide an answer for the Webcast summary. ORNL's response is as follows:

LandScan USA data is not available for distribution since LandScan is a copyrighted software package.

There are a number of LandScan products generated by ORNL. LandScan Global is the primary product and this is a 30 arc-second grid cell database. It is generated annually and should include a year, for example, LandScan Global 2002. The TRAGIS presentation states that population information in the model is from the LandScan USA 15 arc-second grid cell database. Comparison of population between LandScan Global 2000 and LandScan USA will result in different population values for two reasons.

First, areas within the US for LandScan Global are based on Census tract areas and LandScan USA is based on Census block groups.

Second, the grid cell size is different between the two products. LandScan Global is 30 arc-second (roughly 900 meters), and the LandScan USA is 15 arc-second (roughly 450 meters). Therefore, four LandScan USA grid cells represent the same geographic area as one LandScan Global grid cell. Part of the process of the modeling effort of both products is that the population of the grid cells adds up to the population of the Census base area. So in LandScan Global, the grid cells

overlaying a Census tract add up to the population of that tract. With LandScan USA, the geographic base area is the Census block group. Multiple block groups comprise a single Census tract.

Question: Can the rail model be set to show routes that minimize population exposure?

Response: No. The TRAGIS model (as with the predecessor models of HIGHWAY and INTERLINE) has never factored population as a routing criteria, primarily for several reasons.

First, DOE's position is to follow the legal requirements and use the quickest time in transit for highway shipments and the best operational practices to route by rail.

Second, if a purely minimum population route is calculated, the route may end up wandering all over the country and greatly increase the route mileage, transit time, and overall risk.

Third, and especially with the rail mode, a minimum population route may jump between several railroads multiple times. This introduces additional operational complexity because railroad crews are only qualified to operate on one or two subdivisions. So if you have a route that transfers from CSXT to NS, back to CSXT, then to NS again within a distance of several hundred miles, the shipment may involve many more crew changes, delays, and additional cost than a route that remains upon one rail system.

Finally, there just are not that many ways to avoid population centers, because the population centers are the major traffic generation points. Major railroad companies have dramatically reduced their infrastructure over the past 30 years. Major rail companies have become larger due to mergers and many low traffic lines have either been sold off to short line railroads or abandoned. The net result is that the connectivity of the entire rail system has become less complex.

Question: Does TRAGIS consider the number of hazardous substance shipments along a route?

Response: No. DOT is looking at this issue through a study at ORNL on way-bill samples for selected routes. A contact for this study can be requested through the contact shown on the slides.

Question: Does the TRAGIS model calculate or list the counties that a specific route traverses? Some states may want to look at the number of affected counties related to emergency planning and 180 (c) funding.

Response: Nationwide, TRAGIS does not provide an automatic listing of counties along a route, but the TRAGIS rail network has county information imbedded within the database. To obtain such information for rail routes, the user would generate a

shape file of the route (discussed in Section 4.8.3.2 on page 79 of the TRAGIS User's Manual).

As for truck routes, TRAGIS does not have counties currently identified in the highway network. It would only take a little amount of post-processing work on the route files to obtain this information.

TRAGIS does have a feature that reports mileage and population information by county within the State of Nevada.

(Note: This answer was provided by ORNL after the webcast.)

Closing remarks

WIEB thanked DOE for facilitating the webcast. WIEB will be calling a conference call to review what they have heard and to determine what additional questions the states may have on these models.

DOE thanked WIEB and the states for their interest and welcomed any additional questions. If there is interest, ONT will provide an update on the IPM at the TEC meeting in September. Additionally, if all goes as planned, ONT and SNL are planning on having a beta test version of the Investment Planning Model ready for that meeting.

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