EPRI has worked extensively with NEMS for over a decade. For the study, EPRI applied the model to represent Waxman-Markey on behalf of PacifiCorp, using PacifiCorp's assumptions on power plant costs (vintage 2008). The PacifiCorp/EPRI team then established set scenarios with a goal to better understand the role of modeling assumptions in assessing climate policy impacts on energy sector. A reference case was defined as having a full 2 billion tons of offsets availability, plus three offsets sensitivity cases that phase-in offsets from zero:

- Case 1 "Plentiful" 2 Billion Tons by 2030
- Case 2 "Scarce" 1 Billion Tons by 2030
- Case 3 "Very Scarce" half Billion Tons by 2030

Waxman-Markey allows up to 2 billion tons/year of offset use (50%-50% split between domestic and international sources with some opportunity for substitution). Offset quantities allowed in legislation far exceed experiences in Europe's CO<sub>2</sub> trading system. If low-cost offsets are unavailable in quantities approved by the program, much higher allowance prices will be required to meet cap. The study also concluded that market and regulatory uncertainty in offset supply dominates all other uncertainties in impacting the price of carbon. Abundant offsets allow the economy to meet the emissions cap with only limited abatement from the regulated entities covered by the cap-and-trade program. If offsets are limited, most of the abatement is done by the electric sector through the increased use of natural gas and the increased installation of wind generation.

A PowerPoint presentation summarizing study results and entitled "Preliminary Analysis of Waxman-Markey (H.R.2454) Using NEMS for PacifiCorp" is available for downloading from PacifiCorp's IRP website.<sup>5</sup>

## **ENERGY GATEWAY TRANSMISSION PROGRAM PLANNING**

The Energy Gateway transmission project remains a critical component of the short and long-term resource acquisition plans, representing a precondition for maintaining transmission system reliability, supporting future load obligations, and accessing new and existing resource areas.

M-NEMS-Roadshow-draft-9-11-09.pdf.

Case 09-035-54
Date 5-24-10
Witness Darrell Serrore

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<sup>&</sup>lt;sup>5</sup>The link to the document is: http://www.pacificorp.com/content/dam/pacificorp/doc/Energy Sources/Integrated Resource Plan/Environment/W

Construction of the first segment (Populus to Terminal) is underway and remains on schedule for completion in 2010. Populus to Terminal is a new double-circuit 345 kilovolt ("kV") transmission line from the Populus substation near Downey, Idaho to the Terminal substation in Salt Lake City, Utah. The Populus to Terminal line will be placed in service in two phases. The first phase from the Ben Lomond substation (near Ogden, Utah) to the Terminal substation will be in service by June 2010, and the second phase from the Populus substation to the Ben Lomond substation will be in service by December 31, 2010.

As an extension of ongoing transmission planning efforts, Idaho Power and PacifiCorp also recently signed a Memorandum of Understanding ("MOU") that outlines a process to fully define and develop joint ownership of extensive transmission facilities, including the Boardman to Hemingway transmission project and the Gateway West Project. The two companies already share a partnership on Gateway West. Joint ownership of the Hemingway to Boardman project is a new development and is expected to replace further near-term review and consideration of the Hemingway to Captain Jack project listed as "under review" in the 2008 IRP.

Despite this progress, permitting and other related factors require that in-services dates on other segments of Energy Gateway continue to remain flexible. In an effort to maintain schedule flexibility, in-service dates have been updated to allow flexibility while maintaining the urgency to complete the project. The 2010 business plan and associated resource acquisition decisions account for these date adjustments. As issues are addressed and uncertainties eliminated, the Company will continue to adjust its project planning accordingly.

Table 2.2 summarizes the Energy Gateway target in-service date ranges with respect to the dates cited in the 2008 IRP. These date changes are also reflected in the revised transmission action items cited in Chapter 6.

Table 2.2 - Energy Gateway Project Completion Date Changes

	Completion Date or Date Range		
Energy Gateway Segment	2010 Business Plan	2008 IRP	
Segment C: Mona to Limber to Oquirrh	2013	2012	
Segment C: Oquirrh to Terminal	2013-2014	2012	
Segment D: Windstar to Aeolus to Bridger to Populus	2014-2016	2014	
Segment E: Populus to Hemingway	2016-2018	2016	
Segment F: Aeolus to Mona	2017-2019	2017	

In regard to the Walla Walla to McNary project (Segment A), during 2009 PacifiCorp received requests for transmission service, requiring that the Company proceed with the Wallula, Washington to Umatilla, Oregon portion of the Walla Walla to McNary Project transmission line. This section of the Walla Walla to McNary Project is approximately 30 miles in length and will be built on a 125-foot-wide right of way connecting the existing Wallula substation and the McNary substation at Umatilla. Constructing this portion of the line will provide the capacity to add new renewable energy to the system, improve service to customers and improve the reliability of the regional transmission system.

PacifiCorp will work with property owners to obtain rights of way for the Wallula-McNary transmission line segment by the end of 2010. Construction is expected to begin soon thereafter, with plans to bring the new line into service in late 2011. At this point, the Company has not determined when it will construct the Walla Walla to Wallula portion of the McNary Project.

## 3. RESOURCE NEEDS ASSESSMENT UPDATE

## **LOAD FORECAST**

For the final 2010 business plan, PacifiCorp updated its load forecast in October 2009. Relative to the load forecast prepared in February 2009, PacifiCorp system sales and coincident peak dropped for the planning period, with the largest declines occurring in the early years. The main driver for the residential, commercial and industrial class declines is the effect of the economic downturn.

Tables 3.1 and 3.2 report the October 2009 annual load and coincidental peak load forecasts, respectively. Note that this forecast data excludes load reduction projections from new energy efficiency measures (Class 2 DSM), since such load reductions are included as resources in the System Optimizer model. Tables 3.3 and 3.4 show the forecast changes relative to the February 2009 load forecast for loads and coincident system peaks, respectively.<sup>6</sup>

Table 3.1 - Forecasted Annual Load Growth, 2010 through 2019 (Megawatt-hours)

Year	Total	OR You	⇒ WA	CA	a. A UT week	www.WY	ree ID at a	SEID
2010	59,403,758	14,146,530	4,483,577	946,287	24,294,698	10,022,709	3,311,467	2,198,489
2011	61,110,064	14,380,455	4,512,495	972,669	24,943,199	10,352,917	3,722,405	2,225,925
2012	63,264,583	14,843,483	4,563,202	1,002,346	25,968,093	10,837,133	3,796,971	2,253,356
2013	65,126,386	15,062,869	4,571,700	1,015,802	26,918,298	11,357,516	3,919,407	2,280,793
2014	66,912,337	15,205,085	4,590,154	1,026,562	2 <i>7,7</i> 95,597	11,896,327	4,090,398	2,308,214
2015	68,375,219	15,303,232	4,607,980	1,036,984	28,508,281	12,454,198	4,128,899	2,335,646
2016	69,814,947	15,423,718	4,637,827	1,050,642	29,306,675	12,861,601	4,171,422	2,363,061
2017	70,674,381	15,446,754	4,643,972	1,058,194	29,804,384	13,128,929	4,201,648	2,390,500
2018	71,745,215	15,535,683	4,676,978	1,072,219	30,382,350	13,412,924	4,247,146	2,417,916
2019	72,870,856	15,648,922	4,708,154	1,086,040	30,966,450	13,723,600	4,292,333	2,445,357
<b>对腹部</b> 线	Annual Average Growth Rate for 2010-2019							
<b>为位置</b> 。	2.3%	1.1%	0.5%	1.5%	2.7%	3.6%	2.9%	1.2%

Table 3.2 - Forecasted Annual Coincidental Peak Load (Megawatts)

Year	Total	OR	WA	∞CA	UT	WY	. ID	SEID
2010	9,883	2,246	750	153	4,546	1,251	595	342
2011	10,198	2,284	<i>7</i> 59	158	4,667	1,292	686	352
2012	10,539	2,348	792	164	4,834	1,342	700	359
2013	10,831	2,387	777	167	5,004	1,402	725	368

<sup>&</sup>lt;sup>6</sup> Portfolio evaluation for the 2008 IRP used a load forecast prepared in November 2008 as well as the February 2009 forecast.