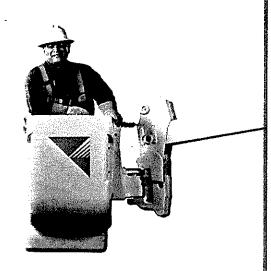
EXHIBIT DTG-2: Excerpts from the 2008 IRP (Volume 1)

Let's turn the answers on.



2008
Integrated Resource Plan
Volume I





4. TRANSMISSION PLANNING

PURPOSE OF TRANSMISSION

The basic purpose of PacifiCorp's bulk transmission network is to reliably transport electric energy from generation resources (generation or market purchases) to various load centers. There are several related benefits associated with a robust transmission network:

- 1. Reliable delivery of power to continuously changing customer demands under a wide variety of system operating conditions.
- 2. Ability to supply aggregate electrical demand and energy requirements of customers at all times, taking into account scheduled and reasonably unscheduled outages.
- 3. Economic exchange of electric power among all systems and industry participants.
- 4. Development of economically feasible renewable generation in areas where it is best suited.
- 5. Protection against extreme market conditions where limited transmission constrains energy supply.
- Ability to meet obligations and requirements of PacifiCorp's Open Access Transmission Tariff.
- 7. Increased capability and capacity to access Western energy supply markets.

PacifiCorp's transmission network is a critical component of the IRP process and is highly integrated with other transmission providers in the western United States. It has a long history of reliable service in meeting the bulk transmission needs of the region. Its purpose will become more critical in the future as energy resources become more dynamic and customer expectations become more demanding.

INTEGRATED RESOURCE PLANNING PERSPECTIVE

Transmission constraints and the ability to address capacity or congestion issues in a timely manner represent important planning considerations for ensuring that peak load and energy obligations are met on a reliable basis. The cycle time to add significant transmission infrastructure is often longer than adding generation resources or securing third party resources. Transmission additions must be integrated into regional plans and then permits must be obtained to site and construct the physical assets. Inadequate transmission capacity limits the utilities ability to access what would otherwise be cost effective generating resources.

Transmission assets tend to be long lived which go beyond a twenty-year planning horizon typically considered for resource planning. The result is a set of transmission assets modeled for least cost planning that addresses PacifiCorp's control area needs as well as enables a first-cut evaluation of the impacts of a large multi-state transmission project.

As discussed in the following sections, PacifiCorp is engaged in a significant transmission expansion effort called Energy Gateway that requires cooperative transmission planning with regional and sub-regional planning groups across the Western Interconnection. Transmission infra-

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structure will continue to play an important role in future IRP plans as segments are added due to Energy Gateway along with other system reinforcement projects.

INTERCONNECTION-WIDE REGIONAL PLANNING

Various regional planning processes have developed over the last several years in the Western Interconnection¹⁹. It is expected that, in the future, these processes will be the primary forums where major transmission projects are identified, evaluated, developed and coordinated. In the Western Interconnection, regional planning has evolved into a three tiered approach where an interconnection-wide entity, the Western Electricity Coordinating Council (WECC) conducts regional planning at a very high level, several sub-regional planning groups focus with greater depth on their specific areas and transmission providers perform local planning studies within their sub-region. This coordinated planning helps to insure that customers in the region are served reliably and at the least cost.

In 2006, WECC took on a larger and more defined responsibility for interconnection-wide transmission expansion planning under the Federal Energy Regulatory Commission's Order 890. WECC's role in meeting the region's need for regional economic transmission planning and analyses is to provide impartial and reliable data, public process leadership, and analytical tools and services. The activities of WECC in this area are guided and overseen by a board-level committee and the Transmission Expansion Planning Policy Committee (TEPPC).

TEPPC's three main functions include: (1) overseeing database management, (2) providing policy and management of the planning process, and (3) guiding the analyses and modeling for Western Interconnection economic transmission expansion planning. These functions compliment but do not replace the responsibilities of WECC members and stakeholders to develop and implement specific expansion projects.

TEPPC organizes and steers WECC regional economic transmission planning activities. Specific responsibilities include:

- Steering decisions on key assumptions and the process by which economic transmission expansion planning data are collected, coordinated and validated;
- Approving transmission study plans, including study scope, objectives, priorities, overall methods/approach, deliverables, and schedules;
- Steering decisions on analytical methods and on selecting and implementing production
 cost and other models found necessary;
- Ensuring the economic transmission expansion planning process is impartial, transparent, properly executed and well communicated;
- Ensuring that regional experts and stakeholders participate, including state/provincial energy offices, regulators, resource and transmission developers, load serving entities, environmental and consumer advocate stakeholders through a stakeholder advisory group;
- Advising the WECC Board on policy issues affecting economic transmission expansion planning; and

¹⁹ The Western Interconnection stretches from Western Canada South to Baja California in Mexico, reaching eastward over the Rockies to the Great Plains.

ssessment

Approving recommendations to improve the economic transmission expansion planning process.

TEPPC analyses and studies focus on plans with west-wide implications and include high level assessments of congestion and congestion costs. The analyses and studies also evaluate the economics of resource and transmission expansion alternatives on a regional, screening study basis. Resource and transmission alternatives may be targeted at relieving congestion, minimizing and stabilizing regional production costs, diversifying fuels, achieving renewable resource and clean energy goals, or other purposes. Alternatives often draw from state energy plans, integrated resource plans, large regional expansion proposals, sub-regional plans and studies, and other sources if relevant in a regional context.

Members and stakeholders of TEPPC includes transmission providers, policy makers, governmental representatives, and others with expertise in planning, building new economic transmission, evaluating the economics of transmission or resource plans; or managing public planning processes.

Similar to the TEPPC activities and process at WECC, a similar process exists under the oversight of the Planning Coordination Committee which provides for the reliability aspects of transmission system planning.

Sub-regional Planning Groups

Recognizing that planning the entire western interconnection in one forum is impractical due to the overwhelming scope of work, a number of smaller sub-regional groups have been formed to address specific challenges in various areas of the interconnection. Generally all of these forums provide similar regional planning functions, including the development and coordination of major transmission plans within their respective areas; however it is these sub-regional forums where the majority of transmission projects are expected to be developed. These forums coordinate with each other directly through liaisons and through TEPPC. A current list of sub-regional groups is provided below:

- NTTG Northern Tier Transmission Group
- CCPG Colorado Coordinated Planning Group
- CG Columbia Grid
- NTAC Northwest Transmission Assessment Committee
- STEP Southwest Transmission Expansion Planning
- SWAT Southwest Area Transmission Study
- CA California Independent System Operator
- WestConnect A southwest sub-regional planning group that includes participants from CCPG, SWAT and other utilities

PacifiCorp is one of the founding members of Northern Tier Transmission Group (NTTG). Originally formed in early 2007, NTTG has an overall goal of improving the operation and expansion of the high-voltage transmission system that delivers power to consumers in seven western states. The NTTG footprint includes approximately 2.7 million customers and more than 27,000 miles of transmission lines within Oregon, Washington, California, Idaho, Montana,

Wyoming and Utah. In addition to PacifiCorp, other members include Deseret Power Electric Cooperative, NorthWestern Energy, Idaho Power, Portland General Electric, and the Utah Associated Municipal Power Systems.

The geographical areas covered by these sub-regional planning groups are approximately shown in Figure 4.1 below:

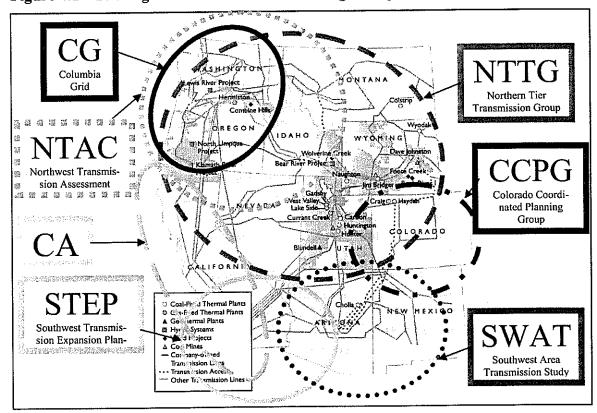


Figure 4.1 - Sub-regional Transmission Planning Groups in the WECC

Energy Gateway

Since the last major transmission infrastructure construction in the 1970s and early 1980s, load growth and increased use of the western transmission system has steadily eroded the surplus capacity of the network. In the early 1990s when limited transmission capacity in high growth regions became more severe, low natural gas prices generally made adding gas fired generation close to load centers less expensive than transmission infrastructure additions. As natural gas prices started moving up in the year 2000, transmission construction became more attractive, but long transmission lead times to resource centers and rate recovery uncertainty suppressed new transmission investment.

Repeated sub-regional studies, including the Rocky Mountain Area Transmission Study dated September 2004, the Western Governor's Association Transmission Task Force Report dated May 2006 and the Northern Tier Transmission Group Fast Track Project Process in 2007 plus subsequent PacifiCorp planning studies concluded the critical need to alleviate transmission congestion and move transmission constrained energy resources to regional load centers.

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The recommended bulk electric transmission additions for PacifiCorp took on a consistent footprint which is now known as Energy Gateway by establishing a triangle over Idaho, Utah and Wyoming with paths extending into Oregon and Washington.

Prior to 2007, PacifiCorp transmission activity was primarily focused on maintaining existing transmission reliability, executing queue studies, addressing compliance issues, and participating in shaping regional policy issues. Investments in main grid assets for load service, regional expansion or economic expansion to meet specific customer requests for service were addressed as transmission customers requested service.

New Transmission Requirements

Historically, transmission planning took place at the utility level and was focused on connecting specific utility generation resources to designated load centers. Under 888/889 Federal Energy Regulatory Commission rules, customer requests for transmission service were sporadic and uncoordinated with high levels of uncertainty in many markets which inhibited transmission investments.

Due to PacifiCorp's transmission system being a major component of the Western Interconnection, the Company has the responsibility to provide network customers adequate transmission capability that optimizes generation resources and provides reliable service both today and into the future. Based on current projections, loads and the dynamic blend of energy resources are expected to become more complex over the next twenty years which will challenge the existing capabilities of the transmission network.

In addition to ensuring sufficient capacity is available to meet the needs of its network customers, the Federal Energy Regulatory Commission in Order 890 encourages transmission providers such as PacifiCorp to plan and implement regional solutions for transmission reliability and expansion.

Based on the aggregate needs of PacifiCorp and others utilities in various sub-regional planning groups, a blueprint for transmission expansion was developed. The expansion plan is a culmination of prior studies and multiple utilities' integrated resource plans (PacifiCorp, Idaho Power, NorthWestern, and Portland General Electric) as well as identified potential plans of independent resource developers. It identifies a transmission expansion plan that will support multiple load centers, resource locations and resource types. In total the expansion plan, now referred to as Energy Gateway calls for the construction of numerous transmission segments – totaling approximately 2,000 miles.

The Energy Gateway blueprint uses a "hub and spoke" concept to most efficiently integrate transmission lines and collection points with resources and loads centers aimed at serving PacifiCorp customers while keeping in sight Regional and Sub Regional needs.

In addition to regulatory requirements for regional planning, future siting and permitting of new transmission lines will require significant participation and input from many stakeholders in the west. As part of new transmission line permitting PacifiCorp will have to demonstrate that sev-

eral key requirements have been met; 1) the Company has satisfied an ongoing requirement for transmission to serve customers, 2) the Company is planning and building for the future and is obtaining corridors and mitigating environmental impacts prudently, and 3) that any projects being proposed economically meet the reliability and infrastructure needs of the region over all. This regional process and the Western Electricity Coordinating Council's planning process are considered critical to gaining wide support and acceptance for PacifiCorp's transmission expansion plan.

Reliability

PacifiCorp's transmission network is increasingly measured against new Federal Energy Regulatory Commission (FERC) / National Electric Reliability Corporation (NERC) mandatory reliability standards which require infrastructure to be in place in case of unplanned outage events. Mandatory compliance with the NERC planning standards is required of the NERC Regional Councils (Regions) and their members as well as all other electric industry participants if the reliability of the interconnected bulk electric systems is to be maintained in the competitive electricity environment.²⁰ The majority of these new mandatory standards are the responsibility of the transmission owner.

NERC Planning standards define reliability of the interconnected bulk electric system in terms of adequacy and security. Adequacy means the electric system needs to be able to supply aggregate electrical demand for customers at all times. Security means the electric system must withstand sudden disturbances or unanticipated loss of system elements. ²¹ Increasing transmission capacity often requires redundant facilities in order to meet NERC reliability criteria.

The ability to recover from system disturbances impacting main grid transmission often require accommodating multiple contingency scenarios which Energy Gateway helps facilitate along with other system reinforcement projects. There have been a number of main grid transmission outages in the latter part of 2007 resulting in curtailment of schedules, curtailments of interruptible loads and generation curtailments. These outages occurred on main grid paths and the ability to recover was severely limited because mitigation measures were electrically restricted due to lack of transmission capacity.

Resource Locations

As an extension of the 'hub and spoke' strategy, PacifiCorp must consider logical resource locations for the long-term based on environmental constraints, economical generation resources, and federal and state energy policies. PacifiCorp's primary energy resources in descending order are located in Utah, Wyoming, desert southwest and the west. Energy Gateway leverages the dynamic and future mix of energy resources and market access points at key locations and supports the Company's preferred resource portfolio.

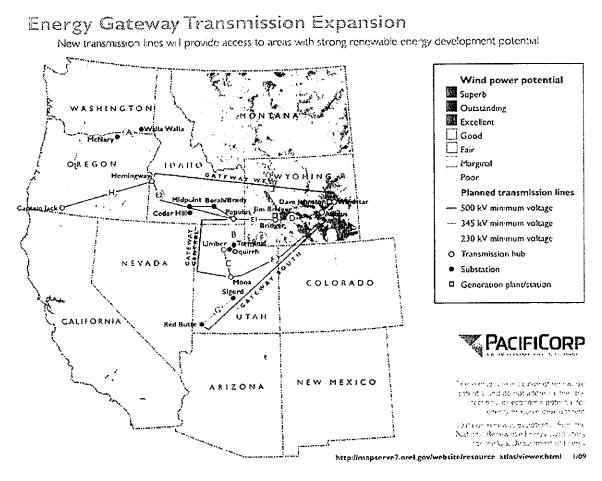
Energy Gateway anticipates the availability and/or development of new resources including renewable energy resources in each of these key areas. The combination of resources cited in the 2008 IRP action plan and Energy Gateway support building to these resource locations.

²⁰ Western Electricity Coordinating Council Reliability Criteria

²¹ Western Electricity Coordinating Council Reliability Criteria

As a complement to the 'hub and spoke' concept, the Western Governors Association has been developing a process for identifying western renewable energy zones (WREZ). These renewable energy zones would be used to facilitate needed infrastructure to integrate and deliver large volumes of renewable energy to the west. Energy Gateway is well positioned access key renewable energy zones, primarily in Wyoming. The geographical areas for wind power potential are approximately shown in Figure 4.2 below.

Figure 4.2 – Western States Wind Power Potential Up to 25,000 Megawatts (Class 5 Wind Locations or Higher)



As another indicator of the importance of Energy Gateway to customers and the region, the Department of Energy sponsored a study through Idaho National Laboratories to assess the economic impact of not building transmission on the Pacific Northwest. The report was published in July 2008 and references:

"The model indicates that the PNWER (Pacific Northwest Economic Region) has a potential economic loss of \$15B to \$25B annually and 300,000 to 450,000 jobs over 30 years if just the one infrastructure transmission line project with the

greatest economic impact is not built (i.e., BC to NorCal), and upwards of \$55B to \$85B annually and 1,750,000 jobs over 30 years if the five transmission line projects of greatest economic impact are not built (i.e., Alberta to PacNW Project, BC to NorCal, Gateway West, Southern Xing & I-5 Corridor Projects, and Mountain States Intertie). These transmission line projects ... transport bulk power and are considered critical for access to preferred electrical generation by areas with high economic development and growth. Note, however, that even if these five projects come to fruition, the added power will not adequately serve the projected PNWER population increase, assuming consumption habits remain the same". 22

"Preliminary engineering review and analysis of planned transmission projects within the PNWER region resulted in the following initial ranking of the projects based on estimates of potential economic value of each project, the likelihood of project execution, the resource area(s) being accessed, the size of the project, and the value of the project to the transmission system as a whole. This analysis was subjective in nature and conducted for comparison purposes only before the full economic analysis and ranking was performed. This ranking was partially based on project listings in the IRPs, knowledge of potential generation resource areas and load centers, areas of transmission need, etc. As stated above, this report ranks evaluated projects according to the INL's assessment of their overall economic impact to PNWER according to the specific factors used in the evaluation. Other analyses may place different emphasis on different factors, resulting in a different overall ranking of projects. Despite these potential differences, all of the projects are considered valuable and necessary to adequately address growing electric power needs. The INL's preliminary ranking is shown in Table 1:²³

	Table 1. Preliminary Ranking of Transmission Projects						
#	Preliminary Rank Project Name	#	Preliminary Rank Project Name				
1	BC to NorCal	9	Inland Project (WY to Las Vegas)				
2	Alberta to PacNW Project	10	Inland Project (MT to Las Vegas				
3	Gateway West - PacifiCorp	11	McNary – John Day				
4	Southern Crossing	12	Southwest Intertie Project (SWIP) North				
5	Gateway South – PacifiCorp	13	Alstom to San Francisco Bay project (Alaska to Alstom project not included)				
6	Gateway Central - PacifiCorp	14	Montana Alberta Tie				
7	Mountain States Intertie	15	Port Angeles-Juan de Fuca"				
8	Interstate 5 Corridor Lines						

ENERGY GATEWAY PRIORITIES

The greater part of the Energy Gateway project originates in Wyoming and Utah and migrates west to Oregon and Washington and south to southern Utah and Nevada. The Energy Gateway

²² Idaho National Laboratory: The Cost of Not Building Transmission, page vi

²³ Idaho National Laboratory: The Cost of Not Building Transmission, page 5

project takes into account the existing 2006 transaction commitments which include transmission facilities from southern Idaho to northern Utah (Path C), Mona to Oquirrh and Walla Walla to McNary.

PacifiCorp is actively pursuing the Energy Gateway transmission project under the following overarching key objectives:

- Network customer driven Energy Gateway is primarily driven by PacifiCorp's retail and network customers' needs. Including Energy Gateway as a base allows PacifiCorp to move forward with the knowledge that over the coming years, transmission lines will be utilized to their fullest potential.
- Support multiple resource scenarios The transmission expansion project must be able to accommodate a variety of future resource scenarios including meeting renewable portfolio standards, supporting natural gas fueled combustion turbines and market purchases, and recognizing that clean coal-based generation may re-emerge as a viable resource.
- Consistent with past and current regional plans The proposed projects are consistent with a number of regional planning efforts. The need to expand transmission capacity has been known for years and should not be a surprise to the regional planning process and justification of need. The regional planning process should reduce the number of parties that may be publicly opposed to these projects due to the scrutiny placed on justification.
- Get it built A significant barrier to achieving "steel in the ground" has historically been
 frustrated by lengthy multi-party negotiations related to planning and governance structure. Minimizing the impacts of these barriers through action-oriented objectives will be
 key to project success.
- Secure the support of state and federal utility commissions for rate recovery Throughout the process, the project will seek input of state and federal regulators to ensure concerns are communicated early and addressed. The project should be undertaken in a manner that is acceptable to commissions and customers.
- Protect the investment to the benefit of customers An appropriate balance must be struck to ensure that network customers do not subsidize third party use and ensure that PacifiCorp's long-term network allocation requirements are retained.

Phasing of Energy Gateway

PacifiCorp has been clear in its position regarding the initial announcement of Energy Gateway that significant infrastructure of new transmission capacity is needed to adequately serve PacifiCorp's existing and future loads over the long-term. The Company's position has not changed in this regard and requires 3,000 MW (1,500 MW on Gateway West and 1,500 MW on Gateway South) of new transmission capacity to adequately serve its customers load and growth needs for the long-term.

PacifiCorp also recognized in its originally announced Energy Gateway Program the need and benefits of potentially "upsizing or scaling up" the Energy Gateway Program to increase transmission capacity by two-fold (6,000 MW). This upsizing would potentially provide a number of local and regional benefits such as: maximizing the use of new proposed corridors, potential to reduce environmental impacts, provide economies of scale needed for large infrastructure, lower

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cost per megawatt of transport capacity made available, and improved opportunity for third parties to obtain new long-term firm transmission capacity.

PacifiCorp still believes there are viable expectations and reasons for upsizing Energy Gateway and has vigorously pursued other participants the past year and a half. To this point, significant barriers still exist preventing PacifiCorp and other third parties from making a business decision to upsize the Energy Gateway Program without taking significant financial and delivery risk. PacifiCorp believes that both short-term and long-term benefits exist as a result of upsizing the Energy Gateway Program and that existing barriers may be overcome at some future date. However; the Company must prudently move ahead now with steps necessary to serve its customers while keeping in sight these potential benefits perceived by upsizing.

PacifiCorp is proceeding with efforts regarding planning and rating requirements for the Energy Gateway Program which facilitates a planned ultimate transmission capacity of 3,000 MW for Gateway West and 3,000 MW for Gateway South (6,000 MW total). In order to achieve the ratings while meeting customer requirements, PacifiCorp plans to achieve the ratings in stages or phases based on need and construction timing

The core transmission expansion plan will construct lines and stations required to deliver 1,500 MW on Gateway West and 1,500 MW on Gateway South (3,000 MW total) of transmission capacity required to meet PacifiCorp's long-term regulatory requirement to serve loads. Additional stages may continue at some future date as determined by, economic, business and regulatory drivers that may be better defined in the upcoming years. Further expansion to the Desert Southwest will also be considered.

Each segment will be justified individually within the overall program. A combination of benefits including net power cost savings derived from the IRP, reliability, capital offsets for renewable resource development in low yield geographic regions and system loss reductions will be used to assess the viability of each segment.

The primary justification due to net power cost savings is derived from modeling alternative resource options under an assortment of forecast assumptions with and without Energy Gateway. The difference between the Energy Gateway build options and no transmission expansion yields a net power savings. Additional considerations listed above are considered on a segment-by-segment basis.

Each Energy Gateway segment will be reviewed again before significant commitments are made to ensure its justification. Therefore, depending on conditions or alternatives certain segments could be deferred or not constructed if not warranted. It is also reasonable to expect certain core segments will be justified in multiple scenarios. Segments will be reevaluated during each IRP cycle and annual business plan similar to generation/market resource plans to ensure they are required.

9. ACTION PLAN AND RESOURCE RISK MANAGEMENT

INTRODUCTION

PacifiCorp's 2008 IRP action plan identifies the steps the Company will take during the next two to four years to implement the plan, covering the 10-year resource acquisition time frame, 2009-2018. Associated with the action plan is an acquisition path analysis that anticipates potential major regulatory actions expected during the action plan time horizon and other events that could materially impact resource acquisition strategies.

The resources included in the 2008 IRP preferred portfolio were used to help define the actions included in the action plan, focusing on the size, timing, and type of resources needed to meet load obligations and current and potential future state regulatory requirements. The preferred portfolio resource combination was determined to be the lowest cost on a risk-adjusted basis accounting for cost, risk, reliability, and regulatory uncertainty.

The 2008 IRP action plan is based upon the latest and most accurate information available at the time of portfolio study completion The Company recognizes that the preferred portfolio upon which the action plan is based reflects a snapshot view of the future that accounts for a wide range of uncertainties. The current volatile economic and regulatory environment will likely require near-term alteration to resource plans as a response to specific events and improved clarity concerning the direction of the economy and government energy and environmental policies. For example, the economic stimulus package enacted in February 2009 ("The American Recovery and Reinvestment Act of 2009") introduced a number of provisions affecting resource planning, including extension and expansion of renewable and distributed energy technology tax benefits, funding of grid infrastructure improvements, and block grants for energy efficiency improvements. Provisions of the economic stimulus package, other than the renewable PTC extension, require more analysis to determine how they impact the Company and should be addressed within the IRP analytical framework. On the climate change mitigation front, the Waxman-Markey CO₂ cap-and-trade provisions are under investigation, but the Company is not able to determine the impact on resource plans until the legislation is finalized. Complicating the picture are state environmental/energy legislative proposals, such as Oregon's Senate Bill 80, that establish a state CO₂ cap-and-trade system.

Resource information used in the 2008 IRP, such as capital and operating costs, is consistent with that used to develop the Company's business plan completed in December 2008. However, it is important to recognize that the resources identified in the plan are proxy resources and act as a guide for resource procurement. Resources evaluated as part of procurement initiatives may vary from the proxy resource identified in the plan with respect to resource type, timing, size, cost, and location. Evaluations will be conducted at the time of acquiring any resource to justify such acquisition.

In addition to the action plan and acquisition path analysis, this chapter addresses a number of topics associated with resource risk management. These topics include the following:

Managing carbon risk for existing plants

- The use of physical and financial hedging for electricity price risk
- Managing gas supply risk
- The treatment of customer and investor risks for resource planning

THE INTEGRATED RESOURCE PLAN ACTION PLAN

Table 9.1 is a summary of the annual MW capacity and timing for the resources contained in the 2008 IRP preferred portfolio. A more comprehensive summary of portfolio resources can be found in Chapter 8.

Table 9.1 - Preferred Portfolio, Summary Level

		· -5/4/500	: 174#XFT9;	반발하는 살다	2015年13年1	Сарясі	ty, MW	[6] 3 31.7240	ng bygrengger		Repair or	Cumulative
	Resource	2009	2010	2011	2012	2013	2014	2015	2016	2017	≥ 2018®	Total
East	1996年第二日本中共和国共和国共和国共和国共和国共和国共和国共和国共和国共和国共和国共和国共和国共	となる。	的性質健康	Nigovija:	gibjacies):	Zoirosii	3/2150/07/1	SHCHA	49H\$YV	/6與老師的	MODELLE P	
-13	CCCT F 2x1, Utah North	-	-		-	ı	570		-	-	-	570
	IC Aero SCCT	-	-		-	-	-	-	261	-		261
	East Power Purchase Agreement	-	•	-	200	-	-	-	•		-	200
	Coal Plant Turbine Upgrades	3	44	33	25	2	[4	,	8	-	-	128
	Geothermal	-		-	+	35		•		-	-	35
	Wind	99	249	-	100	100	100	150	100	100	50	1,048
	Combined Heat & Power	2	2	2	3	3	3	4	4	. 4	4	30
	Distributed Standby Generation	4	4	4	4	4	4	4	4	4	4	38
	DSM, Class 1, Utah Cool Keeper Load Control	25	50	40	30م	10	10	10	10	10	10	205
	DSM, Class 1, Other	*		*		*	*	*	*	*		Up to 90
	DSM Class 2	42	51	49	52	55	55	56	56	. 58	59	532
1000	Front Office Transactions	75	50	150	394	493	200	202	228	717	800	- Personal Park
West	FIRE CONTRACTOR OF A STATE OF THE STATE OF T	经体制的证明	3 14 M (54 o	使用的 用的。	徐阳路附 料	经被加加		MAHATA.	经验 某物数		284) Aug (172)	有效可能的分析型
	Coal Plant Turbine Upgrades		9	9	12	12	-	-	-	-	-	42
	Swift Hydro Upgrades 27	-	-	- 1	25	25	25		4	-		75
177	Wind	45	20	200	-	-	-	-	-	-	-	265
	CHP	1	1	1	1	2	2	2	2	2	2	16
	Distributed Standby Generation	1	1	1	1	1	ı	l.	1	1	1	12
- 110	DSM, Class 1	*	*	•	*	*	*	*	1	٠		Up to 30
	DSM, Class 2	35	36	39	39	38	39	39	39	39	29	372
JVIII.	Front Office Transactions	-	-	59	839	839	739	739	689	289	582	7.000

¹⁷ The 99 MW amount in 2009 is the High Plains project; the 249 MW in 2010 includes the 99 MW Three Buttes wind PPA.

The 2008 IRP action plan, detailed in Table 9.2, provides the Company with a road map for moving forward with new resource acquisitions, including major transmission projects needed to support the preferred portfolio and other Company objectives. (More detail on transmission expansion action items is provided in Chapter 10.)

²⁴ The Swift 1 hydro updates are shown in the years that they enter into commercial service.

^{*} Up to 120 MW of additional cost-effective Class 1 DSM programs (100 MW east, 30 MW west) to be identified through competitive Requests for Proposals and phased in as appropriate from 2009-2018. Firm market purchases (3rd quarter products) would be reduced by roughly comparable amounts.

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Table 9.2 - 2008 IRP Action Plan

Action items anticipated to extend beyond the next two years, or occur after the next two years, are indicated in italics

Action Item	Category	Timing	Action(s)
			Acquire an incremental 1,400 MW of renewables by 2018, in addition to the already planned 75 MW of major hydroelectric upgrades in 2012-2014; PacifiCorp's projected renewable resource inventory by 2018 exceeds 2,540 MW with these resource additions
			 Successfully add 144 MW of wind resources in 2009 that are currently in the project pipeline, including PacifiCorp's 99 MW High Plains facility in Wyoming, and 45 MW of power purchase agreement capacity
			 Successfully add 269 MW of wind resources in 2010 that are currently in the project pipeline, including 119 MW of power purchase agreement capacity already contracted
—	Renewables	2009 - 2018	 Procure up to an additional 500 MW of cost-effective renewable resources for commercial operation, subject to transmission availability, starting in the 2009 to 2011 time frame under the currently active renewable resource RFP (2008R-1) and the next renewable resource RFP (2009R) expected to be issued in the second quarter of 2009
v		TARK	 The Company is expected to submit company resources (self build or ownership transfers) in the 2009R RFP
·····			 Procure up to an additional 500 MW of cost-effective resources for commercial operation, subject to transmission availability, starting in the 2012 to 2018 time frame via RFPs or other opportunities
			 Monitor solar and emerging technologies, government financial incentives, and procure solar or other
		, , , , , , , , , , , , , , , , , , , ,	 Continue to evaluate the prospects and impacts of Renewable Portfolio Standard rules at the state and federal levels, and adjust the renewable against the foliant timeline accordingly.
			Implement a bridging strategy to support acquisition deferral of long-term intermediate/base-load resource(s) in the east control area until no sooner than the beginning of summer 2014
 .			 Acquire the following resources:
2	Firm Market Purchases	2009 - 2013	 Up to 1,400 MW of economic front office transactions on an annual basis as needed through 2013, taking advantage of favorable market conditions
, <u>.</u> .	,		- At least 200 MW of long-term power purchases
			 Cost-effective interruptible customer load contract opportunities (focus on opportunities in Utah)
			 Resources will be procured through multiple means: (1) reactivation of the suspended 2008 All-Source

5	4	ω		Action Item
Class I DSM	Plant Efficiency Improvements	Peaking / Intermediate / Base-load Supply-side Resources		Category
2009-2018	2009-2018	2012 - 2016		Timing
Acquire at least 200 - 300 MW of cost-effective Class 1 demand-side management programs for implementation in the 2009-2018 time frame • Pursue up to 200 MW of expanded Utah Cool Keeper program participation by 2018 • Pursue up to 130 MW of additional cost-effective class 1 DSM products(90 MW in the east side and 30	 Pursue economic plant upgrade projects—such as turbine system improvements and retrofits—and unit availability improvements to lower operating costs and help meet the Company's future CO₂ and other environmental compliance requirements Successfully complete the dense-pack coal plant turbine upgrade projects by 2016, which are expected to add 128 MW of incremental in the east and 42 MW in the West with zero incremental emissions Seek to meet the Company's aggregate coal plant net heat rate improvement goal of 213 Btu/kWh by 2018⁵⁵ Monitor turbine and other equipment technologies for cost-effective upgrade opportunities tied to future plant maintenance schedules 	 Procure long-term firm capacity and energy resources for commercial service in the 2012-2016 time frame The proxy resources included in the preferred portfolio consist of (1) a Utah wet-cooled gas combined-cycle plant with a summer capacity rating of 570 MW, acquired by the summer of 2014, and (2) a 261 MW east-side intercooled aeroderivative simple-cycle gas plant acquired by the summer of 2016 Procure through activation of the suspended 2008 all-source RFP in late 2009 The Company plans to submit Company resources (self-build or ownership transfers) once the suspension is removed In recognition of the unsettled U.S. economy, expected continued volatility in natural gas markets, and regulatory uncertainty, continue to seek cost-effective resource deferral and acquisition opportunities in line with near-term updates to load/price forecasts, market conditions, transmission plans, and regulatory developments. 	 RFP in late 2009, which seeks third quarter summer products and customer physical curtailment contracts among other resource types, (2) periodic mini-RFPs that seek resources less than five years in term, and (3) bilateral negotiations Closely monitor the near-term need for front office transactions and reduce acquisitions as appropriate if load forecasts indicate recessionary impacts greater than assumed for the February 2009 load forecast Acquire incremental transmission through Transmission Service Requests to support resource acquisition 	Action(s)

⁵⁵ PacifiCorp Energy Heat Rate Improvement Plan, March 31, 2009.

9	∞	7	6		Action Item
Planning Process	Distributed Generation	Class 3 DSM	Class 2 DSM	-	Category
2009-2010	2009-2018	2009-2018	2009-2018		Timing
Portfolio modeling improvements • Complete the implementation of System Optimizer capacity expansion model enhancements for	 Pursue at least 100 MW of distributed generation resources by 2018 Procure at least 50 MW of combined heat and power (CHP) generation: 30 MW for the east side and 20 MW for the west side, to include purchase of facility output pursuant to PURPA regulations supply-side RFPs (renewable shelf RFPs and All Source RFPs, which provide for QFs with a capacity of 10 MW or greater), and other opportunities; focus on renewable fuel and other "clean" facilities to the extent that federal and state Renewable Production Tax credit rules provide additional Renewable Energy Credit value to such facilities Procure at least 50 MW of cost-effective customer standby generation: 38 MW for the east side (subject to air permitting restrictions and other implementation constraints) and 12 MW for the west side. Procurement to be handled by competitive RFP for demand response network service and/or individual customer agreements Seek up to an additional 40 MW of customer standby generation if the economic recession and market conditions continue to support elimination of simple-cycle gas units or other peaking resources as indicated by IRP portfolio modeling for the 2010 business plan/2008 IRP update 	 Acquire cost-effective Class 3 DSM programs by 2018 Procure programs through the currently active DSM RFP and subsequent DSM RFPs Continue to evaluate program attributes, size/diversity, and customer behavior profiles to determine the extent that such programs provide a sufficiently reliable firm resource for long-term planning Portfolio analysis with Class 3 DSM programs included as resource options indicated that at least 100 MW may be cost-effective; continue to evaluate program specification and cost-effectiveness in the context of IRP portfolio modeling 	Acquire 900 - 1,000 MW of cost-effective Class 2 programs by 2018 (peak capacity), equivalent to about 430 to 480 MWa • Procure through the currently active DSM RFP and subsequent DSM RFPs	in load growth resulting from economic recovery Procure through the currently active 2008 DSM RFP and subsequent DSM RFPs • For 2009-2010, implement a standardized Class 1 DSM system benefit estimation methodology for products modeled in the IRP. The modeling will compliment the supply curve work by providing additional resource value information to be used to evolve current Class 1 products and evaluate new products with similar operational characteristics that may be identified between plans.	Action(s)

2012	Transmission	12
2010	Transmission	jevni. Jevni
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2009-201	Transmission	5
	Improvements	
Timing	Category	Item
	Timing 2009-2011	

Action Item	Category	Timing	Action(s)
			Permit and build segments of the Energy Gateway Transmission Project to support Pacificorp load growth, regional resource expansion needs, access to markets, grid reliability, and congestion relief
13	Transmission	2014	 Permit and construct 230 kV and 500 kV line between Windstar and Populus
			Permit and construct a 345 kV line between Sigurd and Red Butte
14	Transmission	2016	Permit and build Northwest/Utah/Nevada segments of the Energy Gateway Transmission Project to support PacifiCorp load growth, regional resource expansion needs, access to markets, grid reliability, and congestion relief
			 Permit and construct a 500 kV line between Populus and Hemingway
15	Transmission	2017	Permit and build Wyoming/Utah segment of the Energy Gateway Transmission Project to support PacifiCorp load growth, regional resource expansion needs, access to markets, grid reliability, and congestion relief
			 Permit and construct a 500 kV line between Aeolus and Mona

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10. TRANSMISSION EXPANSION ACTION PLAN

INTRODUCTION

Since the original announcement of Energy Gateway in May 2007 and as discussed further in Chapter 4, PacifiCorp has emphasized that significant infrastructure of new transmission capacity is needed to adequately serve PacifiCorp's existing and future loads. The Company's position has not changed in this regard and still requires 3,000 MW (1,500 MW on Gateway West and 1,500 MW on Gateway South) of new transmission capacity to adequately serve its customers load and growth needs for the long-term.

PacifiCorp also recognized in its original announcement the need and benefits of potentially "upsizing" the Energy Gateway Program to increase transmission capacity by two-fold (6,000 MW). This upsizing would potentially provide a number of local and regional benefits such as: maximizing the use of new proposed corridors, potential to reduce environmental impacts, provide economies of scale needed for large infrastructure, lower cost per megawatt of transport capacity made available, and improved opportunity for third parties to obtain new long-term firm transmission capacity.

PacifiCorp still believes there are short-term and long-term benefits for upsizing Energy Gateway and has vigorously pursued other participants the past year and a half. To this point, significant barriers still exist preventing PacifiCorp and other third parties from making a business decision to upsize the Energy Gateway Program without taking significant financial and delivery risk. PacifiCorp is proceeding with efforts regarding planning, rating, and permitting requirements for the Energy Gateway Program that facilitates a planned ultimate transmission capacity of 3,000 MW for Gateway West and 3,000 MW for Gateway South (6,000 MW total). In order to achieve the ratings while meeting customer requirements, PacifiCorp plans to achieve the ratings in stages or phases based on need and construction timing.

PacifiCorp is moving forward with the expansion plan that will construct transmission lines and substations required to provide 1,500 MW on Gateway West and 1,500 MW on Gateway South (3,000 MW total) transmission capacity required to meet PacifiCorp's long-term regulatory requirement to serve loads.

In addition, several main grid reinforcement projects that are complementary to the Energy Gateway program are scheduled for completion over the next several years. They are described after the Energy Gateway segments.

High-level descriptions of the Energy Gateway segments and Company planning activities are outlined below. In-service dates are based on optimal timing of transmission needs and best efforts to complete construction. The dates reflect the most recent Gateway planning assessment, which occurred after the completion of IRP modeling described in the preceding chapters. Gateway plan modifications will be incorporated in PacifiCorp's 2010 business plan and the 2008 IRP update. In-service dates are subject to timing shifts based on permitting, environmental approvals, and construction schedules.

GATEWAY SEGMENT ACTION PLANS

Walla Walla to McNary - Segment A

Originally planned as a single circuit 230 kV transmission line approximately 56 miles in length between Wall Walla, Washington and Umatilla, Oregon that connects existing substations at Walla Walla, Wallula, and McNary. The initial target completion date was 2010; however, additional information became available in early 2009 that prompted the decision to defer moving forward with the current project scope in 2009.

PacifiCorp acquired the Chehalis generation plant in late 2008 and on February 13, 2009 redirected 470 MW of transmission rights to the Mid Columbia area. Existing transmission rights between Yakima and Walla Walla allow a portion of the Chehalis resources to cover any Walla Walla short resource position. This minimizes any net power costs benefits from the prior economics that showed Hermiston generation located in Oregon displacing Mid-Columbia purchases and serving Yakima and Walla Walla loads during short supply periods.

Over the next six to twelve months, PacifiCorp is actively participating in transmission plans and system rating processes impacting the Northwest, and these plans are expected to mature and possibly influence PacifiCorp's Westside Plan. At that time, the Company will determine any additional transmission needed in the Walla Walla / McNary area. PacifiCorp will continue to evaluate the project and incorporate the analysis with regional transmission needs.

Populus to Terminal - Segment B

A double circuit 345 kV line that will run approximately 135 miles from a new substation (Populus) near Downey, Idaho to the existing Terminal Substation near Salt Lake International Airport west of Salt Lake City, Utah. When completed in 2010, this segment will improve reliability along a critical transmission corridor (Path C) and provide additional transfer capability of energy resources both south bound and north bound. It will also provide a vital link for Energy Gateway path ratings.

Mona to Limber to Oquirrh - Segment C

A single circuit 500 kV line that will run approximately 65 miles between the existing Mona Substation in central Utah to a future substation called Limber in the Tooele Valley, west of Salt Lake City, Utah. It will also include a double circuit 345 kV line that will run approximately 21 miles between the future Limber Substation to an existing substation called Oquirrh in the Salt Lake valley. When completed in 2012, it provides a critical northbound path for additional resource whether internally generated or purchased through market transactions. It will also provide a vital link for reliability and Energy Gateway path ratings.

Oquirrh to Terminal

A double circuit 345 kV line that will run approximately 14 miles between the Oquirrh Substation to an existing Terminal Substation near Salt Lake International Airport west of Salt Lake City, Utah. When completed in 2012, it will add operational flexibility to the bulk electrical system, improved reliability and will provide a vital link for Energy Gateway path ratings.

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Windstar to Aeolus to Bridger to Populus - Segment D

Part of Energy Gateway West, it is comprised of two single circuit 230 kV lines that will run approximately 82 and 72 miles respectively between the recently constructed Windstar Substation in eastern Wyoming to a new substation called Aeolus near Medicine Bow, Wyoming. It will continue as a 500 kV single circuit line that will run approximately 141 miles from Aeolus Substation to a new annex substation near the existing Bridger Substation near Jim Bridger Power Plant in western Wyoming.

The last section will connect the new annex substation located near Bridger Substation to the Populus Substation that is being constructed as part of the Populus to Terminal segment. When completed in 2014, the entire segment will move wind or other resources from eastern Wyoming to a critical hub (Populus) located near Downey, Idaho. The Populus Substation is the intersection substation for Gateway West and Gateway Central.

Populus to Hemingway - Segment E

Two single circuit 500 kV lines that will run approximately 135 and 149 miles respectively between the Populus Substation and the existing Midpoint Substation. One of the lines will also connect the existing Borah Substation between Populus and Midpoint. The segment will continue as a single circuit 500 kV line for approximately 126 miles from Midpoint Substation to a new Hemingway Substation located south of Boise on the south side of the Snake River between the towns of Melba and Murphy. When completed in 2016 the segment will connect resources located in eastern Wyoming and Gateway Central to load centers further west. It will also allow the Company to maintain reliable electric service in the Western Interconnection.

Aeolus to Mona – Segment F

A single-circuit 500 kV line that runs approximately 395 miles between the Aeolus Substation (constructed as part of Gateway West) and the Mona Substation (expanded as part of Gateway Central). When completed in 2017 the segment will connect Gateway West and Gateway Central providing operational flexibility for the bulk electric network, reliability and supports path ratings for each segment.

Sigurd to Red Butte - Segment G

A single circuit 345 kV line that runs approximately 160 miles connecting the existing Sigurd Substation located in central Utah to another existing substation called Red Butte Substation located in southwest Utah. When completed in 2014, it provides a critical path to meet load obligations, increase export capability and to maintain transmission capacity on TOT2C for contracted point to point service. Specific routing alternatives are currently being considered in the permitting and ratings processes.

Segment G originally included a single circuit 500 kV line from Red Butte Substation in Utah to Crystal Substation in Nevada. The transmission line is being deferred for further review due to the fact that existing customer forecasted needs are anticipated to be met without its construction. Studies show bi-directional flows to markets are met by installing upgrades at Harry Allen Substation in Nevada and other system reinforcements in 2014. Although the segment is not needed at this time for the 1,500 MW Gateway South expansion plan, the line segment and related sub-

station upgrades will be required for Energy Gateway South to obtain the next incremental rating of 3,000 MW total.

Construction of the planned transmission segments by estimated in-service dates and additional megawatt capacity are shown in the following sequence of maps. Delivery of the segments by the calendar years shown are particularly critical for Gateway West from Windstar to Populus, Gateway Central from Mona to Terminal, and Gateway South from Sigurd to Red Butte, due to the IRP preferred portfolio reliance on available transmission.

Maintaining sufficient transmission capacity for southwest Utah loads and maintaining contracted point-to-point transmission service prior to the Sigurd to Red Butte - Segment G addition in 2014 will require several substation upgrades. The Sigurd to Red Butte project is being considered with other alternatives to meet the requirements in SW Utah. In 2010, PacifiCorp is planning to install additional station equipment at Harry Allen Substation, Pinto Substation and Three Peaks Substation and in 2011 additional station equipment is being installed at Red Butte Substation.

Additional main grid reinforcement projects also includes upgrades to TOT2C path at Harry Allen Substation in Nevada, which will increase biadirectional flows to markets in the Desert Southwest needed in 2014.

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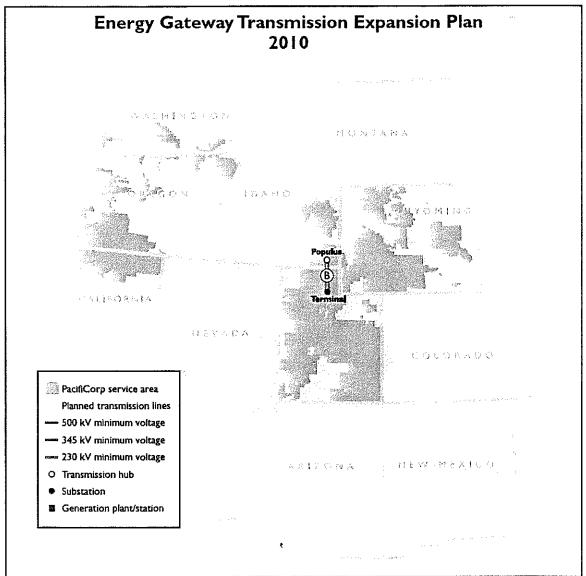
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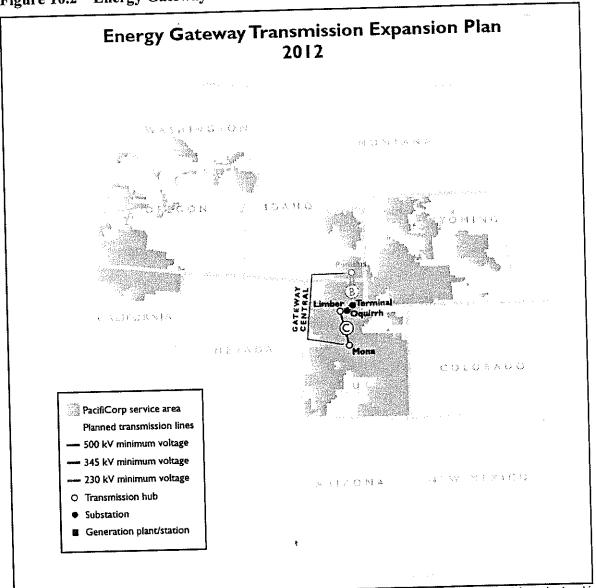
Figure 10.1 - Energy Gateway 2010 Additions



Note: This series of maps generally reflect the expansion necessary to adequately serve PacifiCorp's existing and future loads, which requires 3,000 MW (1,500 MW on Gateway West and 1,500 MW on Gateway South). PacifiCorp is proceeding with efforts regarding planning, rating, and permitting for an ultimate Energy Gateway capacity of 6,000 MW (3,000 MW on Gateway West and 3,000 MW on Gateway South).

Segment	Segment Description	Line	Planned Rating (Initial completion)	Planned Rating (Core completion)
В	Populus - Terminal	345 kV double circuit	700 MW	1400 MW

Figure 10.2 – Energy Gateway 2012 Additions



Note: This series of maps generally reflect the expansion necessary to adequately serve PacifiCorp's existing and future loads, which requires 3,000 MW (1,500 MW on Gateway West and 1,500 MW on Gateway South). PacifiCorp is proceeding with efforts regarding planning, rating, and permitting for an ultimate Energy Gateway capacity of 6,000 MW (3,000 MW on Gateway West and 3,000 MW on Gateway South).

Segment	Segment Description	Line	Planned Rating (Initial completion)	Planned Rating (Core completion)
C	Mona – Limber	500 kV single circuit/	700 MW	1500 MW
	Limber - Oquirrh	345 kV double circuit		1500 MW
Other	Oquirrh - Terminal	345 kV double circuit	700 MW	1300 141 44