



GILL RANCH STORAGE

# Gill Ranch Storage

CEC Project Briefing - June 5, 2008



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# Gill Ranch Storage - Project Overview



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- Purpose – Underground Storage of Natural Gas
- Location – Central San Joaquin Valley
- Capacity
  - 20 Bcf of working gas
  - 650 MMcfd of deliverability
- Target Reservoirs
  - Depleted gas reservoirs in the Starkey formation
- Pipeline Connection – PG&E Line 401
- GRS Open Season
  - Level of interest exceeds capacity

# Ownership Structure

- Gill Ranch Storage, LLC (GRS) and Pacific Gas and Electric Company (PG&E) are “co-developers” of Gill Ranch
  - GRS and PG&E own undivided interests in the project
  - GRS and PG&E are not partners or joint venturers
  - Development risks and costs will be shared but not revenue
  - Independent marketing of capacity
    - GRS will market its allocated facility capacity
    - PG&E will market its allocated capacity with its other owned storage capacity.
- **Entities**
  - NW Natural has established a subsidiary for this project: Gill Ranch Storage, LLC (GRS)
  - PG&E Utility will own its share of the storage project directly

# Phased Development



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- Phase I: Initial Development
  - 20 Bcf working gas capacity
  - In service summer 2010
  - Ownership - 75% GRS, 25% PG&E
  - GRS to operate during development and first 3 years of operation
- Phase II: Future Potential Opportunity
  - Additional 10 to 25 Bcf working gas capacity
  - Goal is to equalize ownership between GRS and PG&E
  - Each party has option to participate or not
  - Subject to future CPUC approval

# Gill Ranch Storage, LLC (GRS)

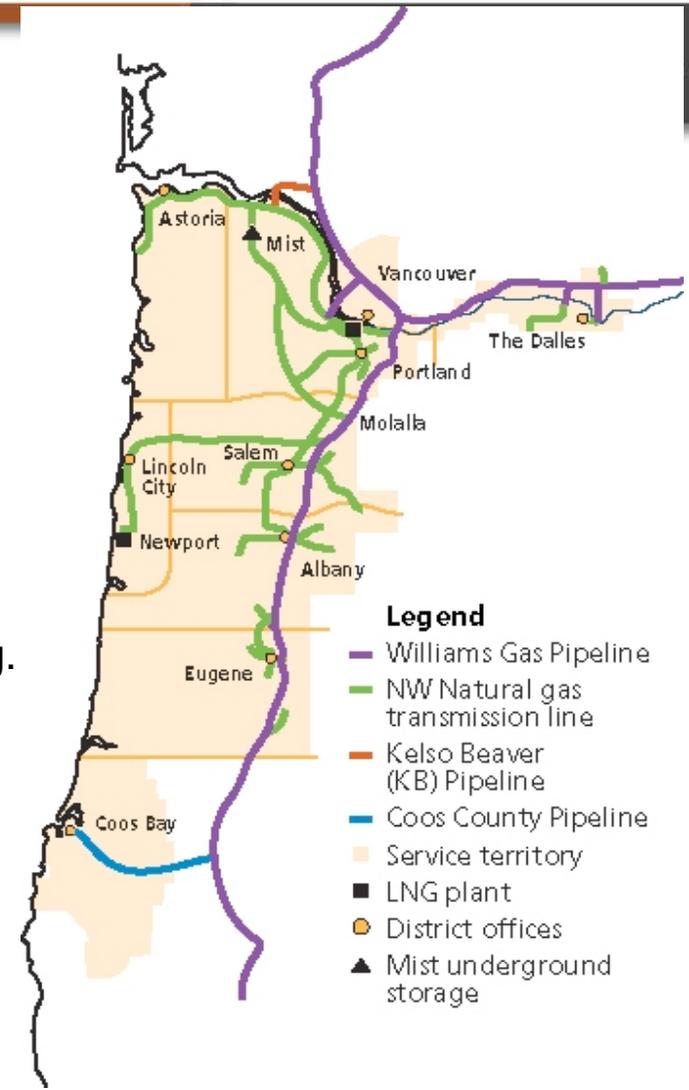


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- GRS
  - An Oregon limited liability company
  - 100% owned by NW Natural (NWN), a Northwest local gas distribution company with operations in Oregon and Washington
  - GRS is separate from NWN; Sole purpose is to own and operate the Gill Ranch assets
  - Customer base of zero in California
  - Will be funded with equity and project financing with shareholders bearing 100% of risk
  - GRS will become a public utility in California upon receipt of CPCN
- GRS is qualified to develop independent gas storage
- GRS will be the operator through development and initial operation
- GRS will market its own capacity

# NW Natural at a Glance

- Company Background
  - 149 year old company based in Portland, OR
  - Market capitalization > \$1 billion
  - AA- credit rating by Standard & Poor's
  - Recognized as one of America's "100 Best Corporate Citizens" for 7<sup>th</sup> year in a row
- Key Operating Information
  - Over 650,000 customers at year-end 2007
    - Annual growth rate over twice the national avg.
  - Overall customer service ranked No. 1 in the West and No. 2 in the nation among 58 participating gas utilities. (JD Power and Associates, 2007.)
  - Gas distribution and transmission system totaling 13,187 miles
  - 1,127 employees at 2007 year-end

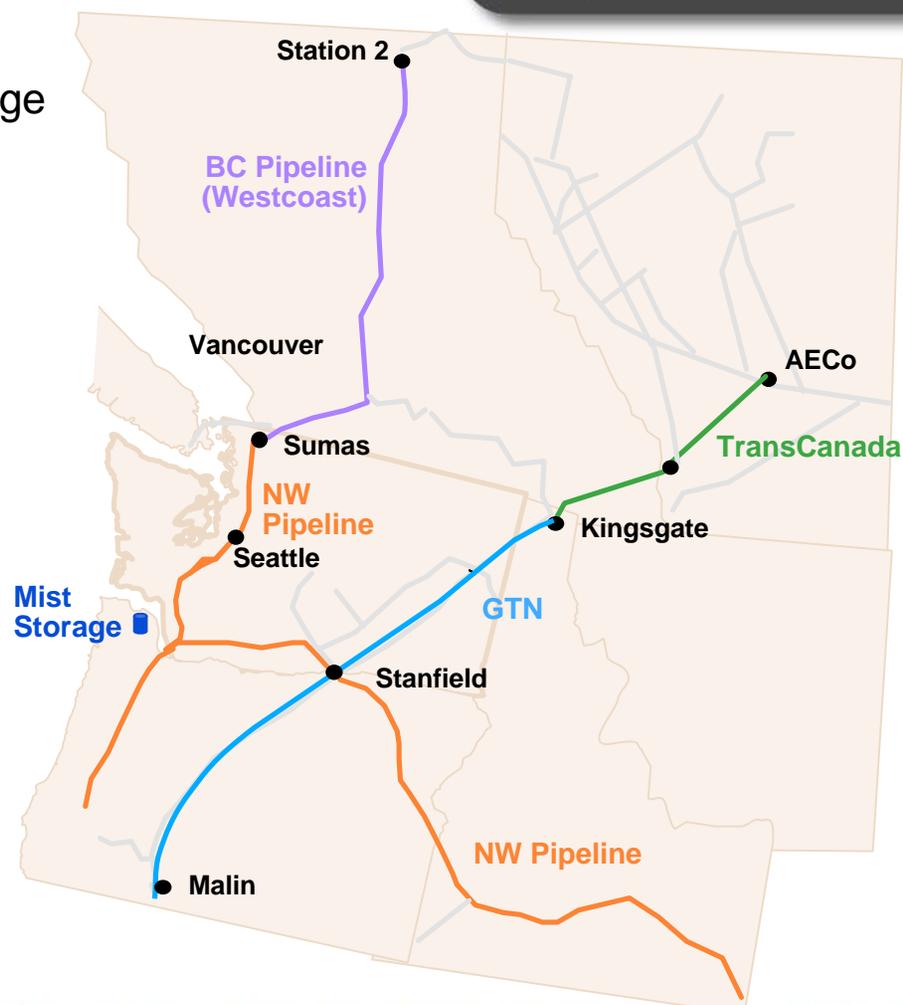


# Existing NWN Interstate Storage



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- Mist Storage Field in NW Oregon
  - 16 Bcf of company-owned gas storage
  - With further growth potential
- Serves the greater Pacific NW
  - Oregon, Washington, Idaho
  - British Columbia
- Balanced mix of customers
  - LDC's
  - Generators
  - Marketers and Producers
- Separate business segment
  - Distinct profit center in the utility
  - About 10% of company earnings



# PG&E: Existing Storage



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- Own and Operate three storage facilities
  - McDonald Island: 82 Bcf Working Gas
  - Los Medanos: 17.5 Bcf Working Gas
  - Pleasant Creek: 2.25 Bcf Working Gas
  - Combined average withdrawal rate of 1.5 Bcf/day
- Storage Services Provided
  - Core Storage
    - Firm Core (Schedule G-CFS)
  - Market Storage
    - Firm Noncore (Schedules G-SFS, G-NFS, G-NAS)
    - Parking (Schedule G-PARK)
    - Lending (Schedule G-LEND)
    - Most services are negotiable subject to price caps
  - Load Balancing
    - G-Bal – Monthly balancing for end-use customers
    - +/- 5% of metered use

# PG&E: Storage Capacity Allocation

Service	Average Injection (MDth/d)	Inventory (MMDth)	Average Withdrawal (MDth/d)
Core Storage	157	33.5	1,111
Market Storage	130	10	340
Load Balancing	76	4.1	76

Firm capacities in the table above were prepared in anticipation of filing PG&E's Gas Accord IV Application. These capacities were never filed because the case was settled before the PG&E's Application was submitted.

# PG&E: Storage Competition

	Injection (Mdt/d)	Inventory (Bcf)	Withdrawal (Mdt/d)
PG&E	363	47	1527
Wild Goose	450	29	700
Lodi (with full Kirby Hills development)	750	34	850

# PG&E: Gill Ranch Development



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- Provides storage capacity to meet growing demand for storage in California
- Additional storage facilities on gas system benefit all gas customers
  - Increases security of supply
  - Lowers commodity costs
- Central location near Fresno diversifies locations of storage facilities in state
- Co-owner structure allows PG&E to expand storage capacity while sharing project development risk

# The Project (Phase I)

- The Storage Field
  - Three depleted Starkey reservoirs to be developed
  - 12 - 15 injection/withdrawal wells located on four drilling pads
  - 4 monitoring wells
- The Central Compression Station
  - Single pad (approximately 10 acres)
  - 45,000 Bhp of compression
  - 650,000 Mcfd of withdrawal capacity; 3+ inventory turns
  - Dehydration system, flow and pressure controls and monitoring systems
  - Maintenance facility and offices
- The Transmission Pipeline
  - 26 miles of 30" pipe (1,200 psig MAOP)
  - Connection to PG&E Line 401 north of Panoche
  - Sized to handle Phase II development without looping
- Electric Power Line (115kV)
  - Tie-in point located approximately 10 miles northwest of Gill Ranch
  - Route follows existing distribution

Note: Field components and capabilities are projected. Modifications may occur as analysis proceeds.

# Gill Ranch Storage - Project Location

- Located in central California about 20 miles west of Fresno
- Close to PG&E's backbone transmission system
- Depleted dry gas field with multiple prospective storage zones
- Lots of development flexibility and expandability
- Only storage project located on the southern part of PG&E's system



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# Gill Ranch – Field Pipeline Map



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## Gill Ranch Gas Storage Pipeline Project



Data Source: ESRI Data & Maps: StreetMap USA, 2001-2006.

Note: The information herein was compiled from multiple sources, is considered reliable and the most current available; it is, however, provided without warranty, either express or implied. No liability is assumed either directly or indirectly.

# Current Project Status



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- **Preliminary development underway**
  - Engineering design underway
  - Environmental field work is nearing completion
  - Reservoir model built and under refinement
  - Pipeline routes evaluated & proposed route selected
  - Electric power line: preferred route identified
  - Interconnects with PG&E (both electric & gas) being designed
  - Land and mineral owner negotiations ongoing
  - Project briefings for local elected officials ongoing
  - CPUC CPCN applications, including PEA, being prepared

# Project Milestones



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- GRS Open Season – Fall 2007
  - Level of interest exceeds capacity
- CPUC Filings–Early Summer 2008 (target)
  - GRS CPCN Application, including PEA
  - PG&E CPCN Application
- CPCNs Issued to GRS and PG&E – Summer 2009 (target)
- Construction
  - Commence Upon Receipt of CPCNs and other project related permits
  - Complete in Summer 2010 (target)
- In-Service – Summer 2010 (target)

# Contact Information



GILL RANCH STORAGE

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