

# Low Impact Hydro Workshop

## Bend, Oregon

### September 22-23, 2011

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# Untapped New Hydro

## Conventional Hydro Pipeline (capacity)

Efficiency  
Gains  
**15 GW**

Non-Hydro  
Dams  
**63 GW**

Pumped  
Storage  
**35 GW**

**Small  
hydro  
36 GW**



## U.S. Secretary of Energy, Stephen Chu

“By improving and deploying advanced hydropower technologies, we can maximize our use of this proven clean energy resource, create jobs, and reduce our reliance on fossil fuels”.

“Hydropower can be used to store energy to help utilities better integrate other sources of renewable energy like wind and solar into the grid.”

# So, why no small hydro boom?

- ❑ Regulatory framework and small hydro:
  - ❑ FERC, USFWS, ACE, State environmental departments, etc.
  - ❑ Expense disproportionate to project size and impact
  - ❑ Hydro developers receive roughly half the tax credit given to wind and solar developers
  
- ❑ Solutions? Two bills slowly moving through Congress:
  - ❑ Small-Scale Hydropower Enhancement Act – would exempt all projects smaller than 1.5 MW on non-federal conduits from FERC licensing requirements
  - ❑ Hydropower Improvement Act – would streamline permitting on existing dams and create competitive grant program. Also expand R&D for new hydro technologies



## On the bright side...

- Several hundred permits are now pending with FERC, most for run-of-river projects
- Nearly \$17 million in funding from DOE for projects to advance hydropower technology
  - In the Pacific Northwest:
    - Earth by Design – Bend, OR
    - Percheron Power – Kennewick, WA
    - SMUD – Sacramento, CA (2 awards)
    - Natel Energy – Alameda, CA (2 awards)
    - EPRI – Palo Alto, CA