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Bringing Renewables to Wall Street

Solar and Hydrokinetic:

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Technologies

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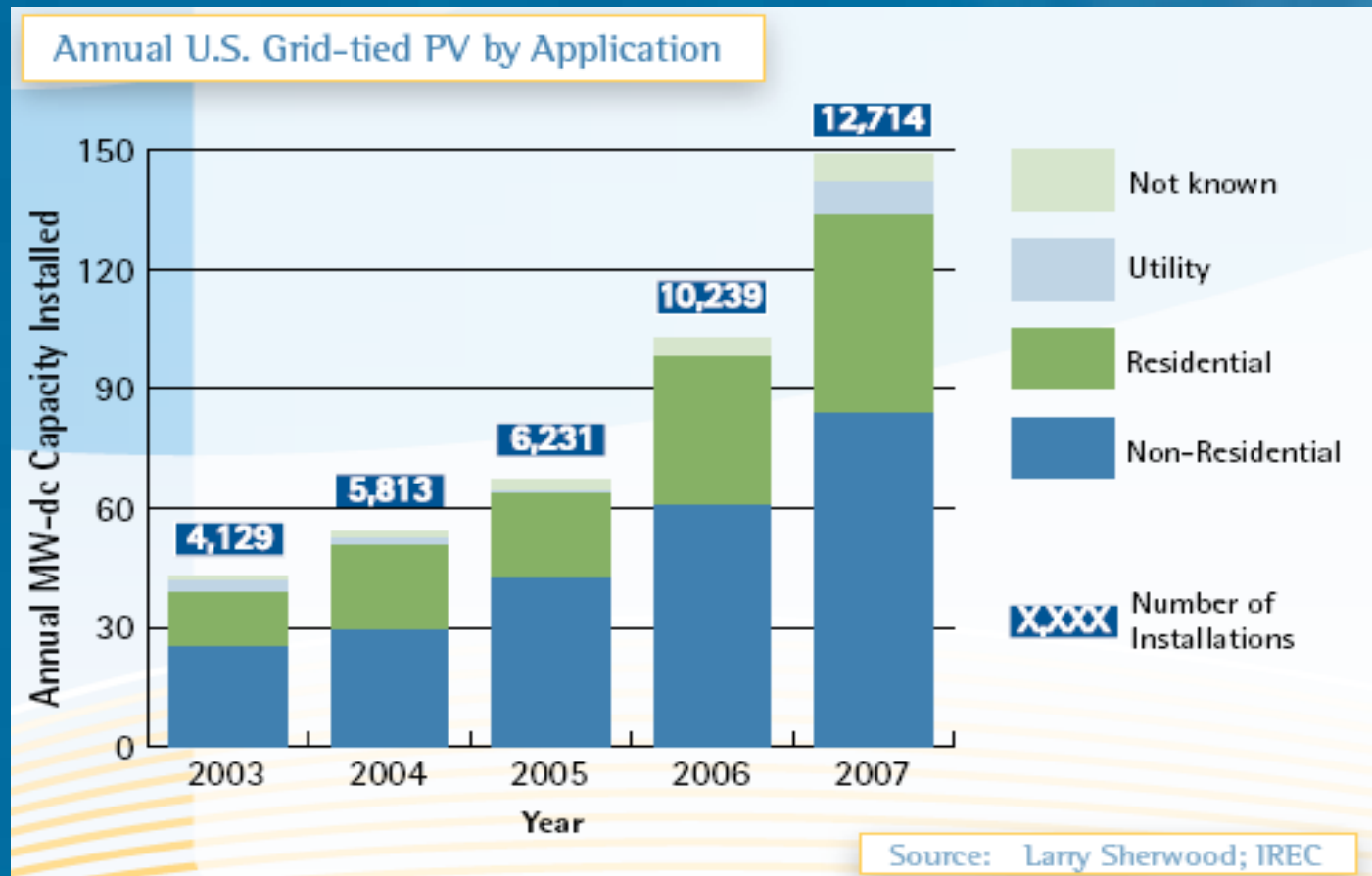


Solar Has Experienced Significant Growth

- Installed grid-tied solar PV grew more than 48% between 2006 and 2007
- At year-end 2007, the U.S. had just over 3,400 MW of installed solar power
 - 750 MW of PV, 418 MW of utility-scale concentrating solar power, and 2,250 MW of solar hot water systems.



Growth in PV – 2003-2007



Proposed CSP Plants

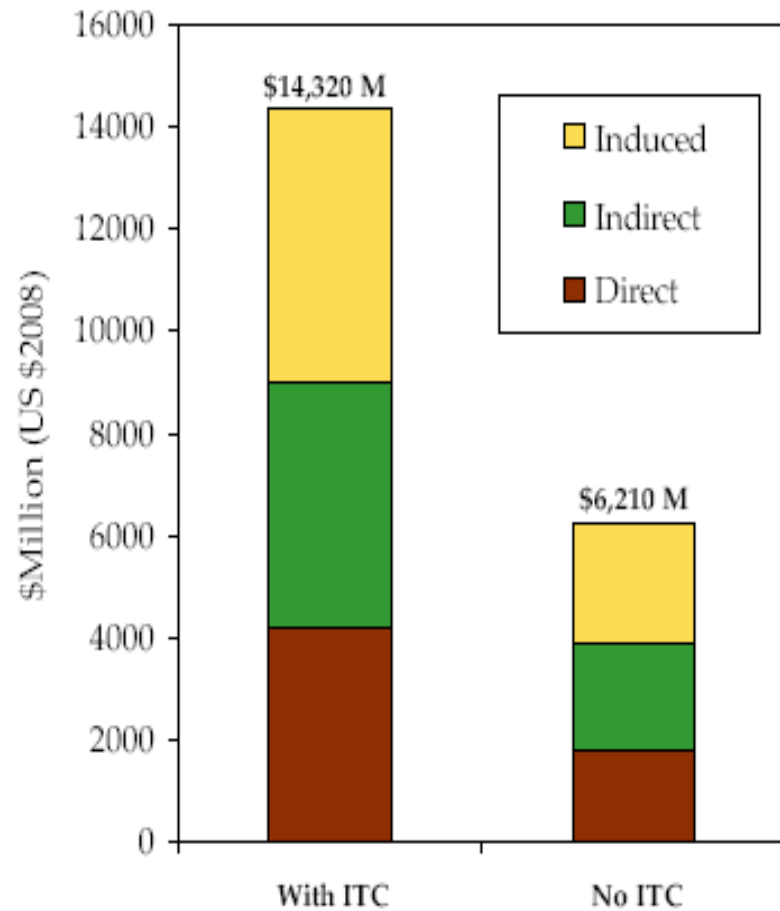
Announced CSP Plant Construction in the US

Installation Name and Technology Developer	Technology Type	Output (MW)	Status
Solel SEGS	Trough	353.8	Operational
Acciona Nevada Solar One	Trough	64	Operational
Solargenix Saguaro APS Plant	Trough	1	Operational
Stirling Energy SDG&E Plant	Dish-Engine	300	Feasibility
Ausra & PG&E Plant	LFR	177	Feasibility
BrightSource Energy - Ivanpha 1	Tower	100	Feasibility
Victorville Hybrid Gas-Solar Plant	Trough	50	Feasibility
Sopogy Demonstration Plant	MicroCSP	1	Feasibility
Solel PG&E Plant	Trough	553	Planning
Stirling Energy Systems SCE Plant	Dish-Engine	500	Planning
Stirling Energy Systems SCE Plant Exp.	Dish-Engine	350	Planning
Ausra & Florida Power & Light Plant	LFR	300	Planning
Stirling Energy SDG&E Plant Exp 1	Dish-Engine	300	Planning
Stirling Energy SDG&E Plant Exp 2	Dish-Engine	300	Planning
Harper Lake Solar Plant	Trough	250	Planning
Arizona Public Services/ Abengoa	Trough	280	Planning
BrightSource Energy - Ivanpha 2 and 3	Tower	300	Planning
Emcore/SunPeak Power	Lens CPV	200	Planning
Palmdale Hybrid Gas Solar Plant	Trough	50	Planning
Future U.S. CSP contract potential		4,430 MW	

Source: Prometheus Institute, Sorin Grama



2009 Economic Impact of ITC extension (\$Million) – PV



Key Assumptions

- 2009 PV Installation Assumptions:
 - 790 MW if ITC extension is enacted
 - 325 MW otherwise
- PV CAPEX (Installed Cost): \$5,400 – 12,000/kW_{DC}
 - Assume 55% of manufacturing investment stays in U.S.
 - Assume 100% of integration, installation and O&M stays in the U.S.
- PV OPEX (O&M): \$10-12/kW-yr
- Indirect Economic Impact: 110% of Direct Impacts for CAPEX
 - 70% for OPEX
- Induced Economic Impact: 130% of Direct Impacts for CAPEX
 - 90% for OPEX

Source: Navigant Consulting

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Marine Energy Potential

- River, Tidal/Current, and Wave
- Approximately 600 MW installed in the rest of the world
 - Few prototypes in operation in the U.S.
- EPRI has calculated a total annual average wave energy potential of 2,100 terawatt-hours.

