



Emerging Renewables Program and Performance-Incentive Update



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Today's Presentation

To Cover Today:

- Emerging Renewables Program (ERP) Overview
- ERP Update
- Performance-Based Incentive Program (PBI)
- Future Directions



Emerging Renewables Program

Goal: accelerate cost reduction and market acceptance through volume production of emerging renewable technologies

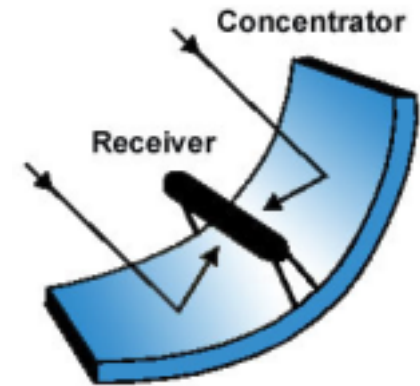
- Program began in 1998 (ER “Buydown” program)
- Provided rebates for more than 50% of installed PV in the state (~58MW of 100+MW)
- Provides rebates for purchasing & installing distributed generation renewable systems
- Reduces the up-front costs for customers
- Focus on grid-connected systems meeting on-site load



ERP Eligible Technologies



- Solar PV (~98%)
- Solar Thermal Electric
- Fuel Cell (from ren. source)
- Small Wind



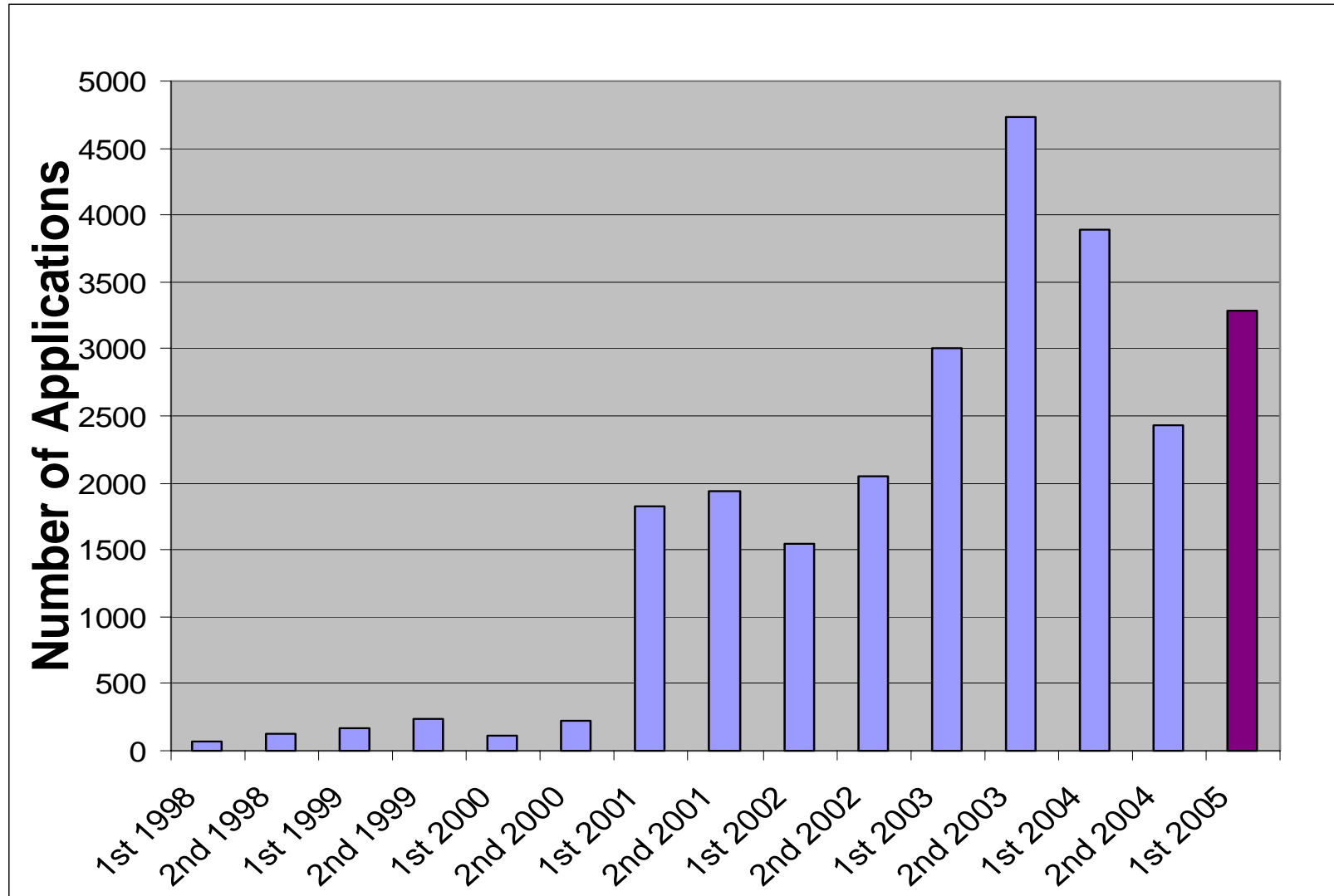


Recent Program Changes

- No July rebate drop (\$2.80/W continues for PV, etc.)
- Option for developers to allow limited reservations without predetermined sale
 - Reservations granted for 10% of lots in subdivision based on equipment for largest system on models
- Can now fax R1 (*but don't mail and fax*)
- Affordable Housing Projects – defines common areas and other clarification
- And PBI capacity factor (to discuss)

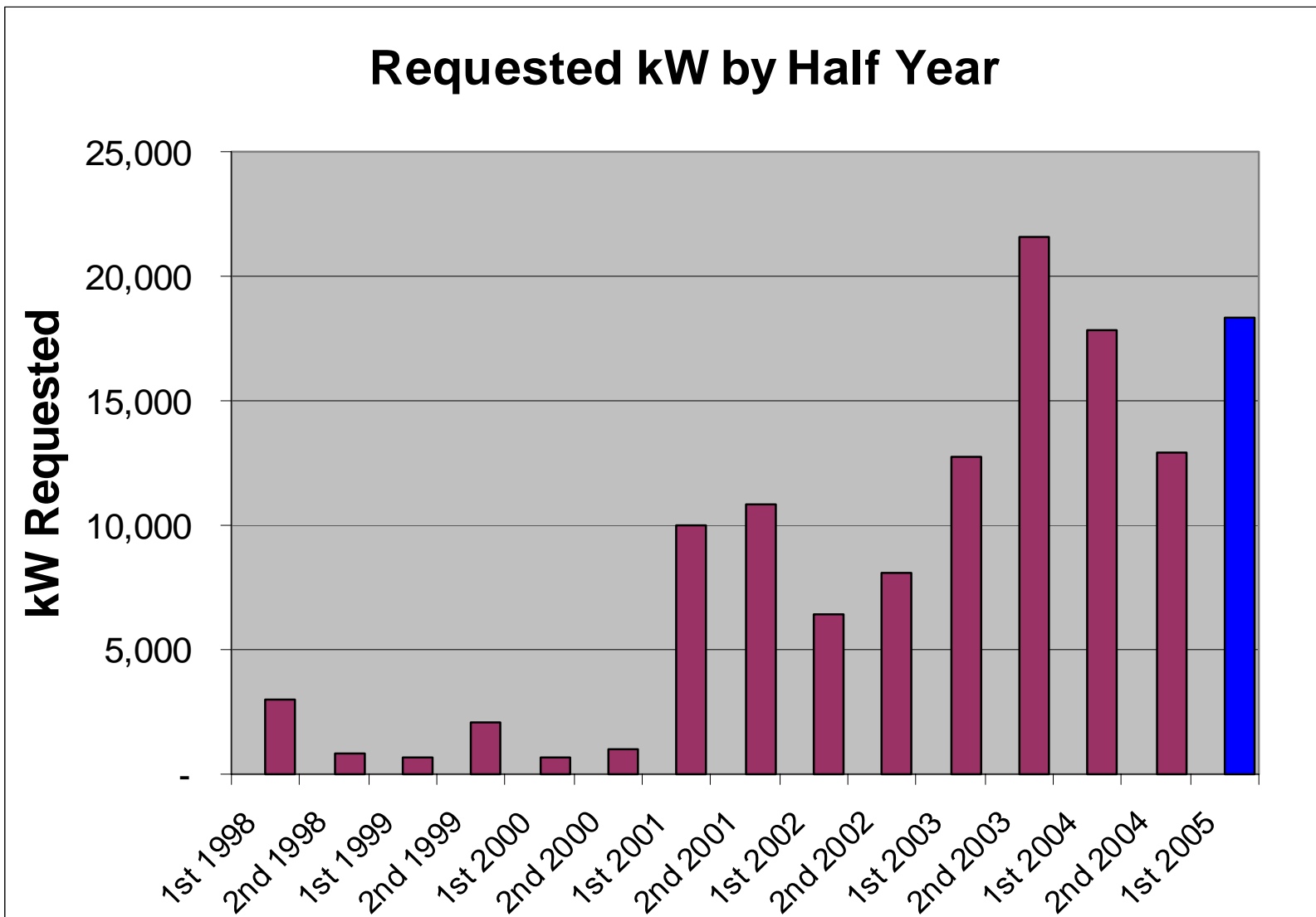


Applications Received





Application Requests by kW





Performance Based Incentive (PBI) Program

Overview

- PBI developed to encourage highly efficient systems and makes incentive payments based solely on system output.
- Designed as a pilot program
- Began in January 2005
- \$10 million reserved for program



PBI Details, Continued

- Must meet ERP requirements
 - IOU electric service territories (PG&E, SDG&E, SCE, Bear Valley Elec.)
 - New equipment only
 - Must use CEC eligible equipment list
 - Etc.
- Can not be combined with ERP, SGIP or other ratepayer incentives



PBI Details, Continued

- No size limit, capped at \$400,000, \$1,000,000 per organization.
- One year reservation to install system.
- Three year payout (quarterly) based on \$.50. kWh generated.
- Complete program details in ERP Guidebook (see Section VIII)
- See “Decisions on the Pilot Performance-Based Incentive Program” for more information



PBI Benefits

- Increased tax benefits for commercial – in some instances the ability to use the full system cost for credits and accelerated depreciation
- Does not have a 30kW capacity limit like regular ERP
- Discourages poorly sited and installed systems
- Protects against removing/dismantling systems
- Promotes system maintenance
- More cost-effective



PBI Status

- Six applications total - 3 approved, 3 pending
- 1 participant online and already received first payment
- System size ranges from 5 kW to 120 kW with average approximately 60kW
- Inquires increased in past 1-2 months



PBI

- The following system sizes would be required to generate the \$400,000 maximum cap given the capacity factor:

Reservation Amount = (PV Array kW) PTC(8760 hrs/yr)(.3 kWh/kW)(\$.5/kWh)(3 years)

System Capacity Factor meet reservation cap	System size required to
• 30%	101 kW
• 25%	122 kW
• 18%	169 kW



PBI

- Capacity Factor: The ratio of the net electricity generated, for the time considered, to the energy that could have been generated at continuous full-power operation during the same period... basically the percentage of the time the system operates at full power.
- A conservative 30% capacity factor is used to ensure enough money is reserved. The capacity factor was increased from 25% to 30% in the Fifth Edition Guidebook (July '05)



PBI

- Revenue grade meter required
- ANSI 12.1C meets the requirement
- Confirmation from a Nationally Recognized Testing Laboratory, such as a letter, preferred before listing
- Currently 2 meters are on the list of eligible equipment:
- Power Management ION 6200
- E-MON D-MON



Capacity Factor

- ERP Site Verification Report (forthcoming) of 165 systems found a PTC average capacity factor of 18% and at STP 15%.
- Energy Commission staff believes system capacity factor will not exceed 25%



PBI

- Website gives details on how to be listed as eligible
- Reporting Energy Generation
- Data Acquisition System
- System output data must be updated to the web without direct intervention
(third party verifier, i.e., Fat Spaniel Technologies), *or*
- Utility reports the system's output data



ERP Future

- *With SB1 not being approved, the California Solar Initiative may be the path to Million Solar Roofs Initiative.*
- *CEC is working closely with the CPUC on this.*
- *Stay tuned*



ERP Future, Cont.

Working Now on Streamlining and Improvements

- Call center – now have more lines, longer coverage and instituted training
- Task Force assembled to move to web-based application process and more efficient processes
- Some will be incorporated in next Guidebook (Jan. 2006, most likely)
- Will be providing analysis for our Renewables Committee on impacts from recent federal Energy Bill



For More Info

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