Evaluation of the 2002-2005 Center for Irrigation Technology's Agricultural Pumping Efficiency Program

Presentation for the MAESTRO/CALMAC Evaluation Showcase

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Pacific Energy Center, San Francisco, CA

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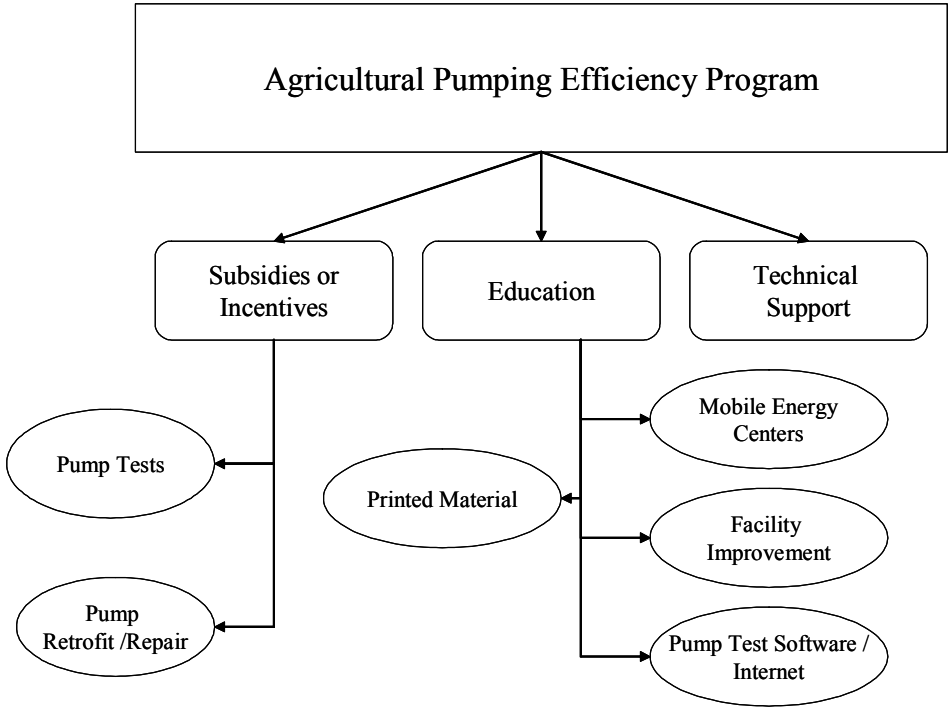
Program Description

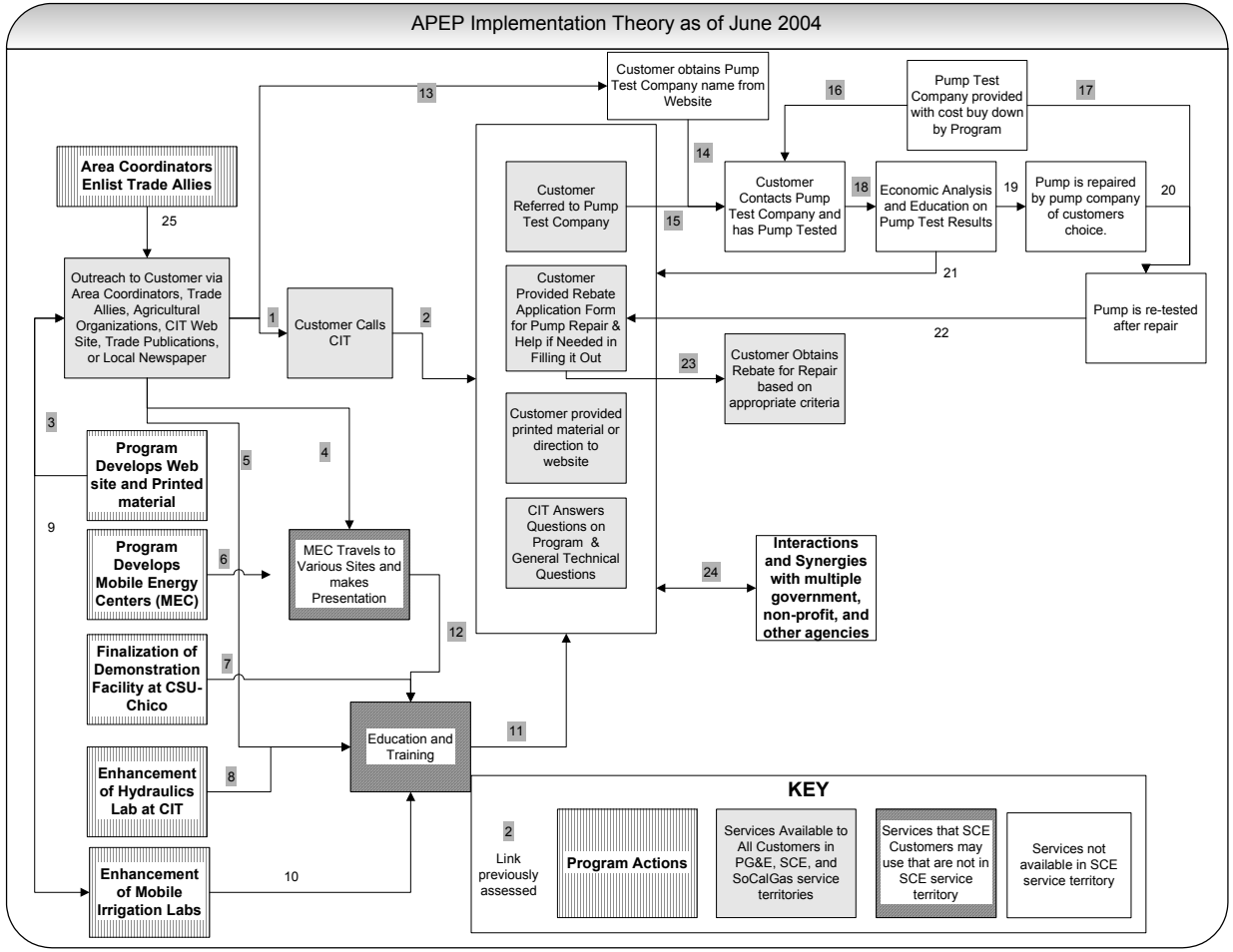


- Two objectives of APEP were:
  - Get highly efficient pumping systems in place.
  - Manage those systems properly.
- In all IOU service territories in 2002/03. Not in SDG&E in 2004/05

Evaluation Description

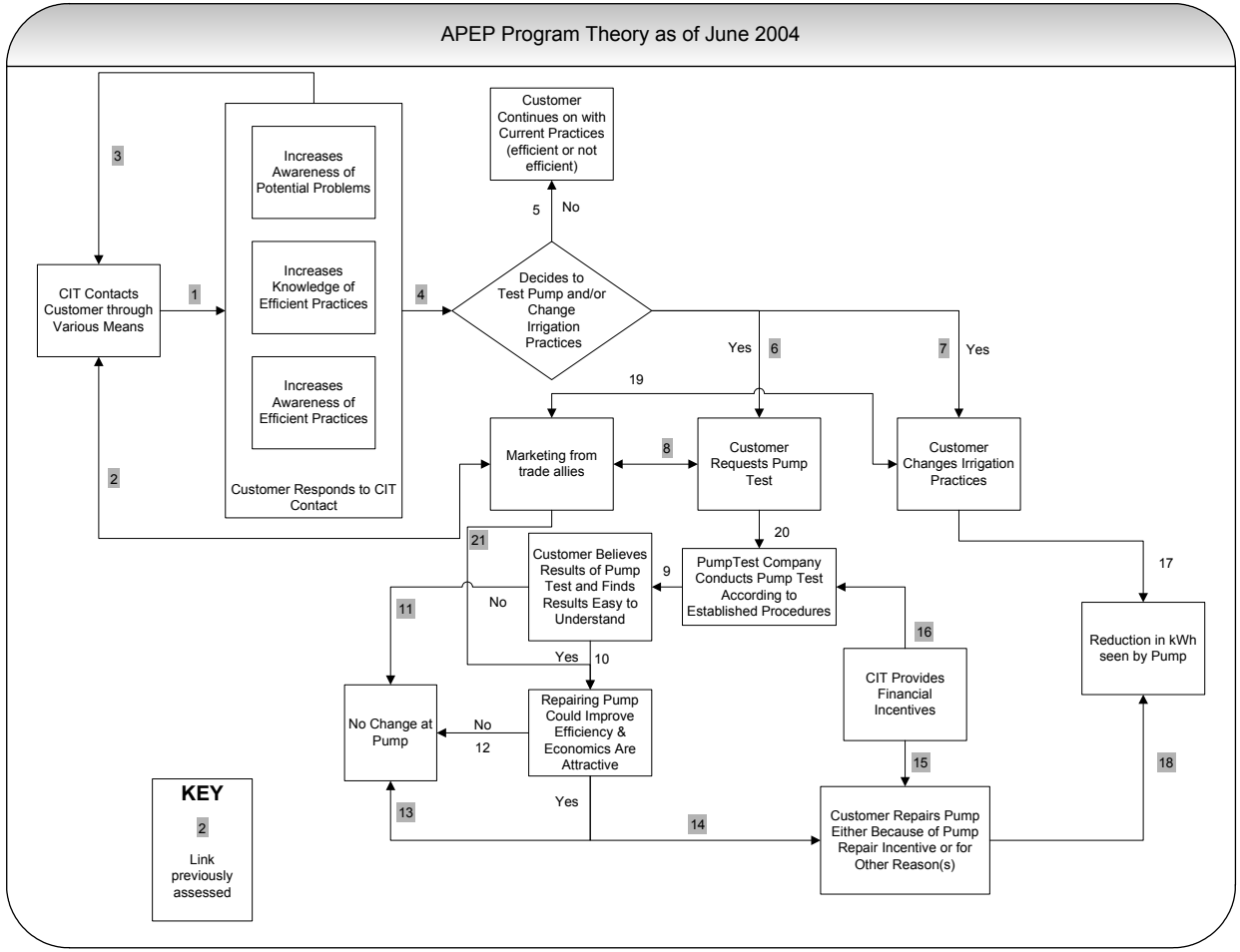
- Evaluation completed by Equipoise Consulting Inc., Ridge & Associates, Vanward Consulting, and California AgQuest Consulting Inc.
- 2002/2003
  - Energy Impact evaluation
  - Program theory assessment
  - Process evaluation
  - Assessment of relationships between APEP and other entities
- 2004/2005
  - Program Design assessment for flow meters as a potential energy saving measure in this sector
  - Energy Impact evaluation

Program Logic Models



Highlighted numbers were assessed in the 2002/2003 evaluation.

Program Logic Models



Highlighted numbers were assessed in the 2002/2003 evaluation.

Evaluation Data Collection

Collection Type	N 2002/2003	N 2004/2005
Telephone Survey	396	250
Onsite Audit of MEC	12	0
In-depth Interviews	9	0
Database Verification	3	2

Evaluation Results – 2002/2003

- Successful at reaching smaller, family-owned businesses.
- Analysis showed that information from the economic analysis of the pump, the APEP seminars, or MEC demonstrations all had a positive impact on the likelihood that someone will make a change to their pumping system.
- Process evaluation developed a picture of an exceptionally well-run program that appropriately staffed positions, established good communication, developed and clearly communicated the program goals to staff and contractors, tracked progress against those goals and communicated that progress to staff. Participants showed high levels of satisfaction with their program interactions and trade allies felt that the program was doing a good job overall.

Evaluation Results – 2004/2005

- Premature to recommend that a full educational component focusing on flow meters be added to the APEP (or any other agricultural program) or to provide incentives for the purchase of flow meter. However, some flow meter education should be provided.
- Flow meter evaluation indicated the following areas to stress during education efforts:
  - Installation of flow meters can reduce operating costs. This is particularly important since cost is one of the major barriers to the installation of flow meters and reduced operating costs can help to reduce the payback on such a purchase.
  - There are a large number of behavioral and hardware changes that can be better informed using information provided by flow meters.
  - Because water use appears to be a more important factor than energy use in the decision to install flow meters, stressing in these educational materials the reduction of water use is recommended.

Evaluation Results – 2002/2005

	N Pump Tests	Net Annual MWh Impact	Net Annual Therm Impact
2002 /2003	6,193 (124% of goal)	9,762 (95% of goal)	186,637 (137% of goal)
2004 /2005	1,513 (76% of goal)	4,797 (69% of goal)	85,959 (150% of goal)

Final Note

- The evaluation reports (4 files) can be found on the CALMAC website (www.CALMAC.org)
- Perform a custom search using “Center for Irrigation Technology” as the implementer
- You can reach the evaluator at Mary@EquipoiseConsulting.com

Attachment 1 – picture of one of two mobile energy centers created by APEP

Attachment 2 – picture of a set up of a mobile energy center