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Market Transformation as a Means for Delivering Regional Conservation Results

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Market Transformation (MT)

- ▶ “Market transformation,” as a concept, came about in response to changes in regulated energy markets in the late 1990’s.
- ▶ Market Transformation (MT) differs from traditional water conservation programs that offer customer incentives or direct provision of water efficient devices or services.
- ▶ A market transformation (MT) occurs when a new technology or method emerges, is found to be superior, and results in the product and/or service, which pre-dated it, to become obsolete.

A Summary

This presentation summarizes an evidence-based white paper that analyses experiences with MT:

- ▶ to assess how “market transformation” and traditional programs have **succeeded** and **failed**;
- ▶ to describe the **components** of a market transformation program;
- ▶ to help **maximize water savings** from regionally-allocated funding for conservation (WUE) programs.

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Questions

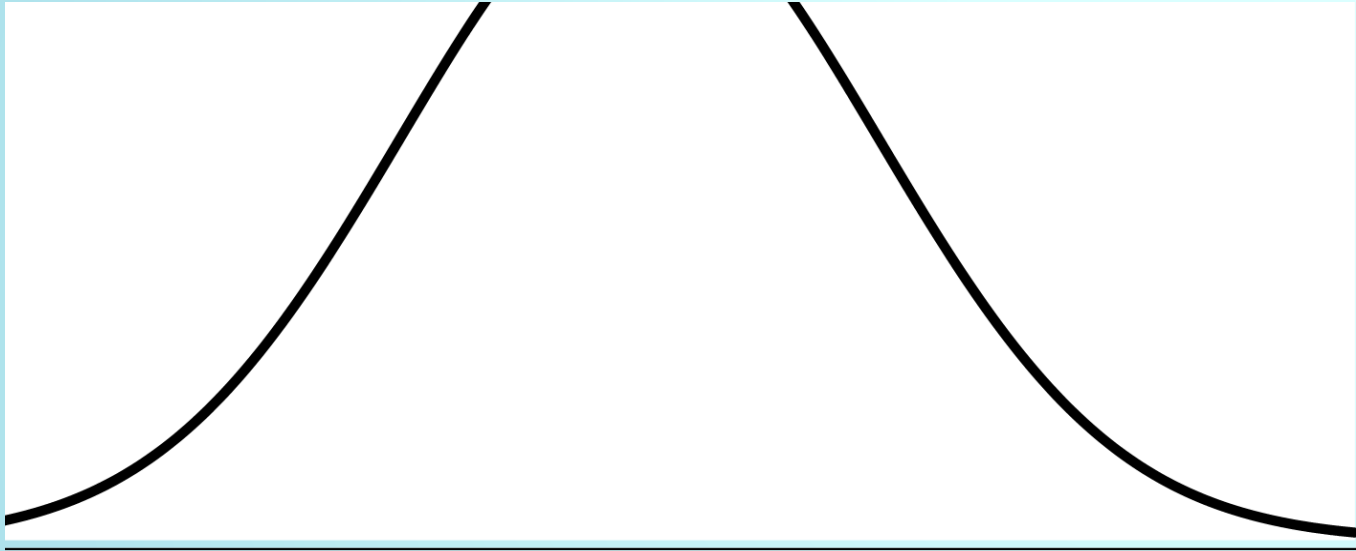
- ▶ Which energy efficiency MT efforts worked at transforming markets and how did they work?
- ▶ Which efforts failed and what were the critical failure points?
- ▶ What is the evidence for equivalent water efficiency practices?

5 Types of Consumers

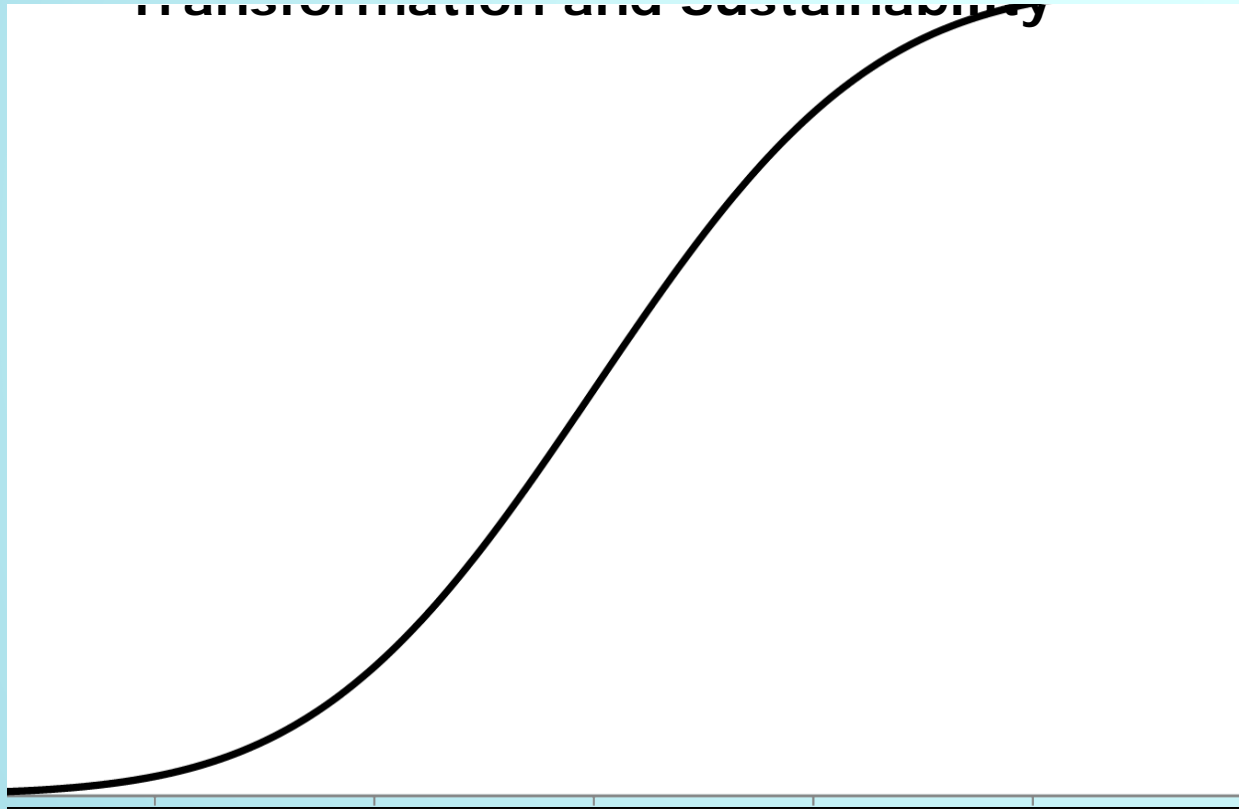
MT characterizes customers by how they respond to market offers:

- ▶ Innovators: adventurous persons
- ▶ Early adopters: educated leaders
- ▶ Early majority: deliberate decision makers
- ▶ Late majority: cautious and skeptical individuals
- ▶ Laggards: risk averse persons

Cross Section of Market Respondents



Market Transformation S Curve

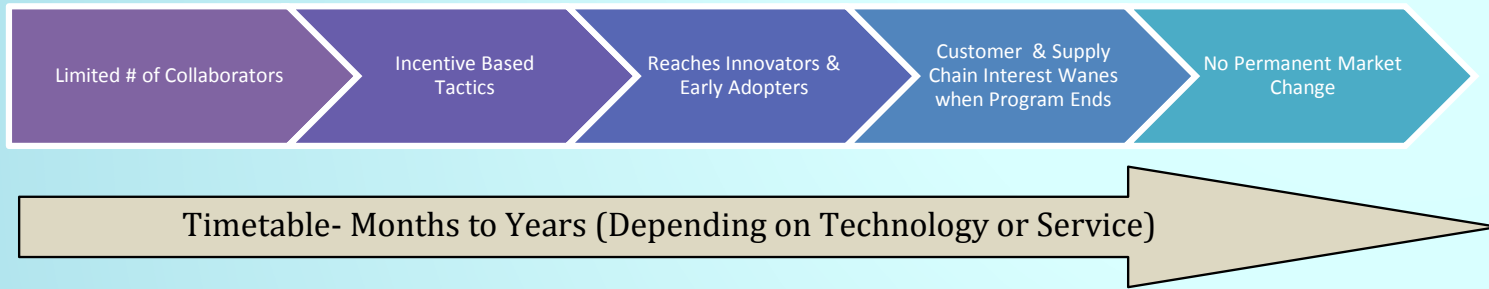


Strategies to Effect Change

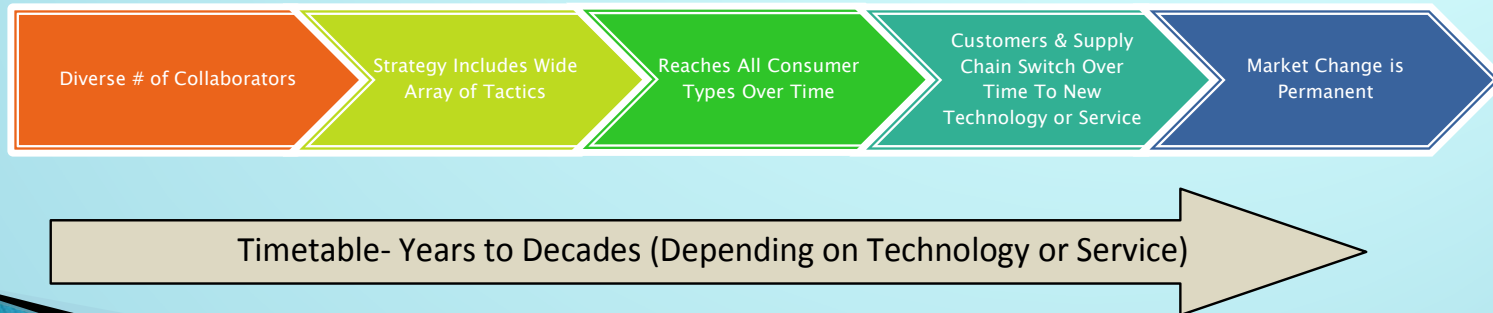
- ▶ Education and Engagement
- ▶ Pilot Projects
- ▶ Programs
- ▶ Financial Incentives
- ▶ Requests for Voluntary Changes
- ▶ Regulatory or Ordinance Changes

Market Transformation vs Market Acceleration

Market Acceleration



Market Transformation



Stages of Market Transformation

- ▶ Decision made to Initiate MT Process
- ▶ Planning
- ▶ Early Phase Initiatives
- ▶ Mid-Phase Initiatives
- ▶ Late Phase Initiatives
- ▶ Evidence of MT Success

Decision made to Initiate MT Process

- ▶ Need for Principal Leading Organization
- ▶ Form Strong Functioning Collaborative Team
- ▶ Establish Funding and Timing
- ▶ Area Coverage, Target Market and Population
- ▶ Projected Timing

Planning

- ▶ Research Current Market
- ▶ Determine Acceptable Costs versus Benefits
- ▶ Identify Barriers
- ▶ Document Desired Outcome
- ▶ Construct Detailed Plan

Early, Mid and Late Phase Initiatives

- ▶ **Early Phase –**
 - Education and outreach – no momentum to build on
 - Work with manufacturers and product rating agencies
 - Mid–course corrections– what to incent
- ▶ **Mid Phase –**
 - Education and outreach continues
 - Late–majority consumers
 - Showcasing leading manufacturers and products
 - Change of Incentives
- ▶ **Late Phase**
 - Awareness high
 - Less need for incentives
 - Shift to changing codes

Evidence of MT Success

- ▶ Monitor Results and Modify
- ▶ Transitional Strategies (Knowing When to End)

Case Studies

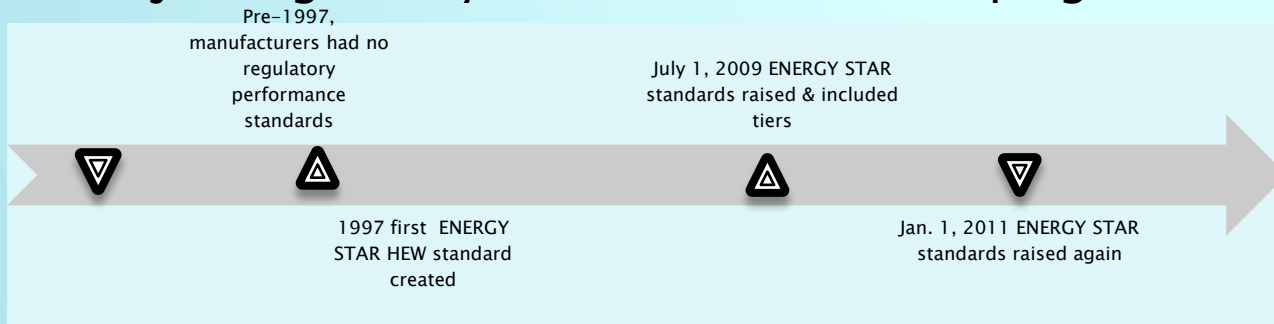
- ▶ High Efficiency Clothes Washers
- ▶ Pre-Rinse Spray Valves
- ▶ Efficient Toilets
- ▶ Efficient Water Rates

High Efficiency Clothes Washers

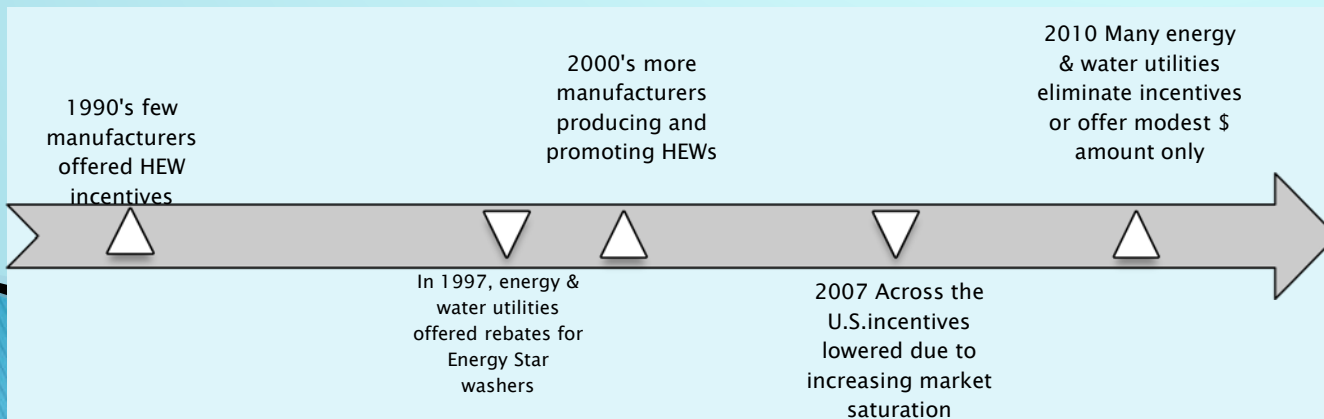
HEW Saturation Percentage

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
4%	6%	9%	9%	10%	16%	23%	27%	37%	38%	42%	NA%	NA%

Major Regulatory Enactments and Campaigns



Utility/Retailer/Manufacturer Initiatives Conducted Over Time

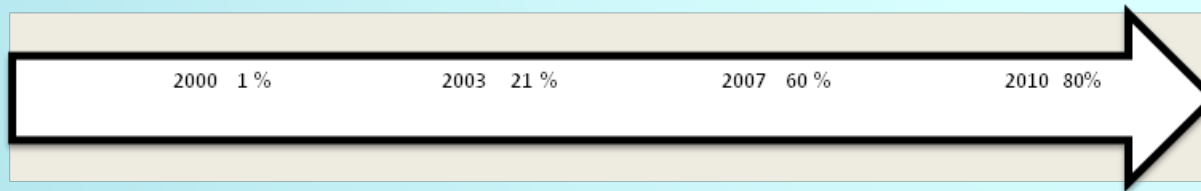


Pre-Rinse Spray Valves

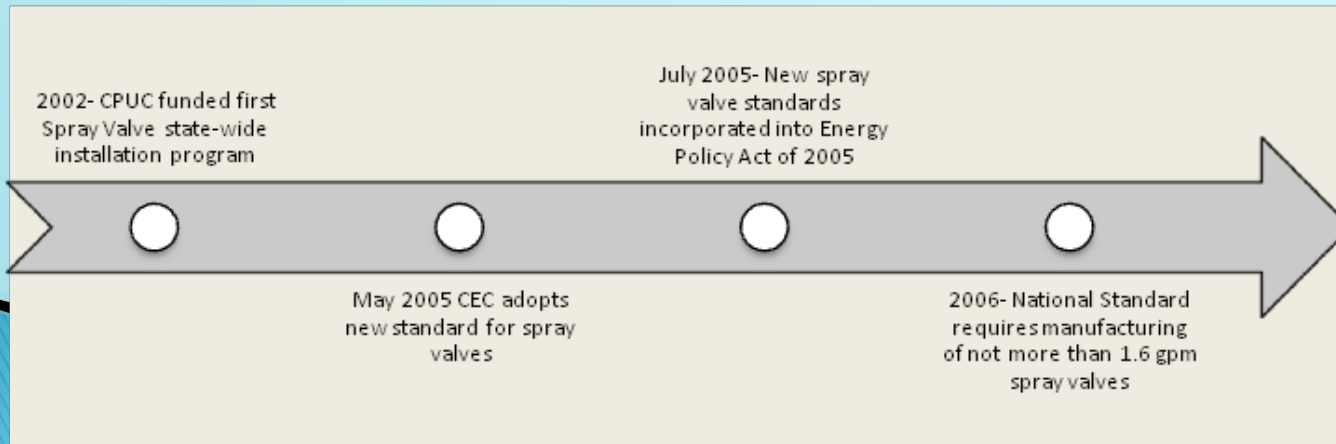
Pre-Rinse Spray Valves Savings 1.6gpm

Hours of Spray Valve Usage	Water Savings gallons/day	Waste Water Savings gallons/day	Gas Savings therms/day
1 hour/day	60 gallons	60 gallons	0.5 therms
2 hours/day	120 gallons	120 gallons	1.0 therms
3 hours/day	180 gallons	180 gallons	1.5 therms

Pre-Rinse Spray Valves California Saturation

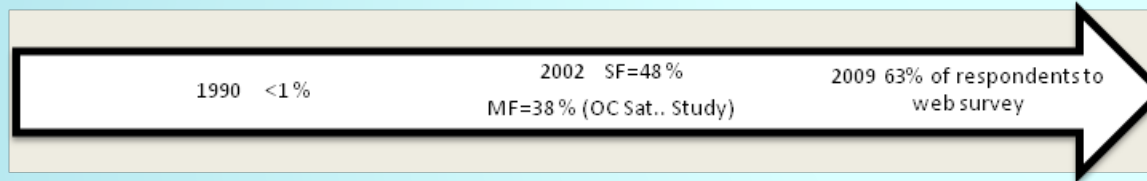


Major Regulatory Enactments and Campaigns

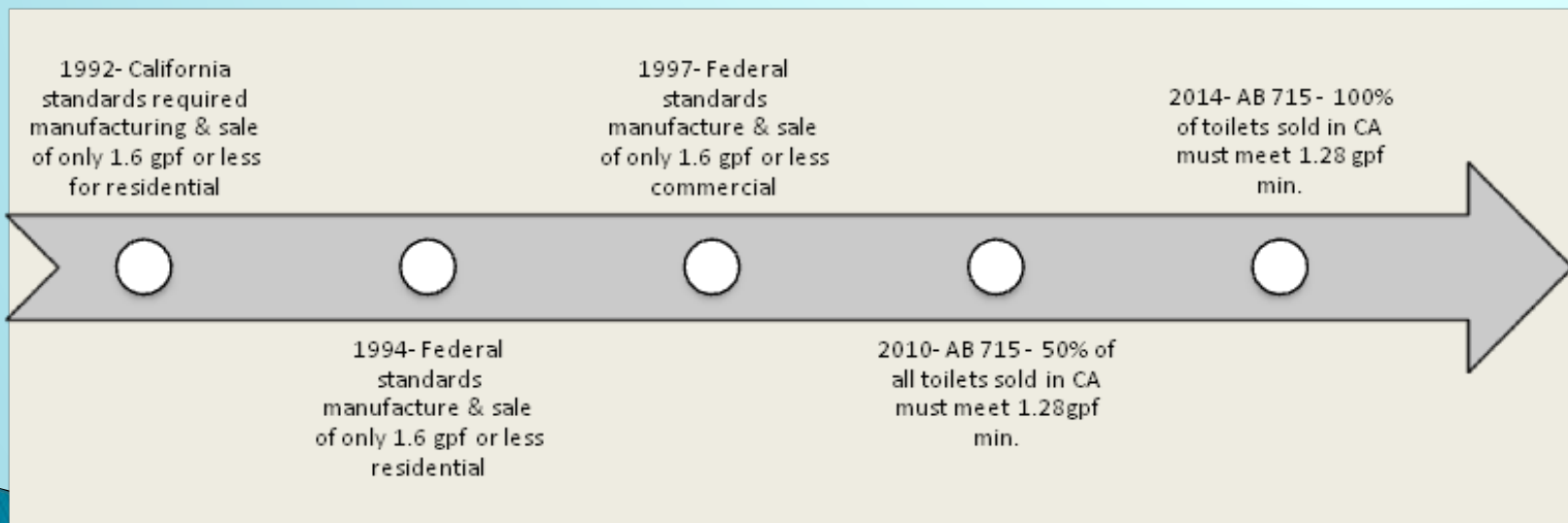


Efficient Toilets

Estimated Saturation of ULFT & HET fixtures in California

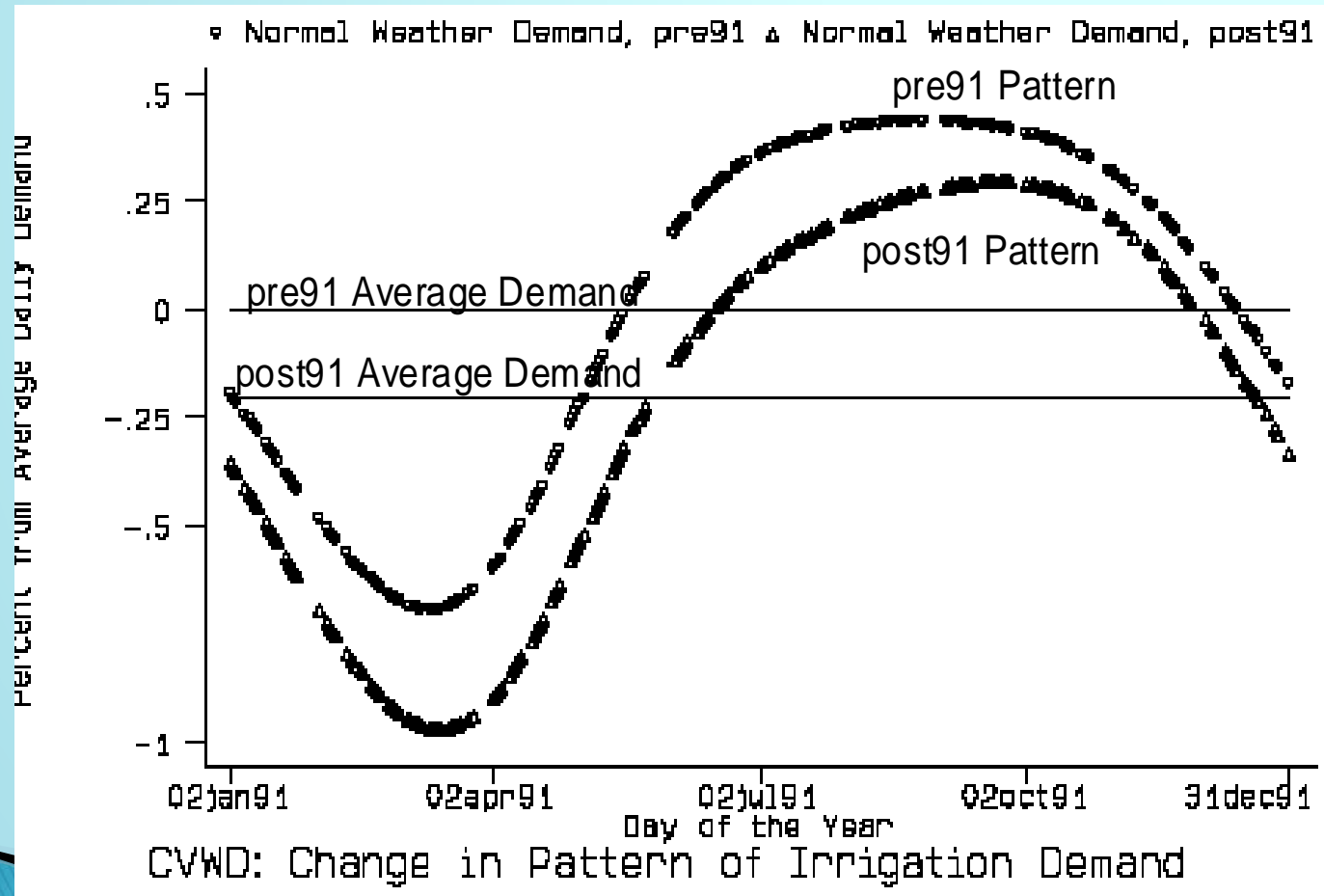


Major Regulatory Enactments and Campaigns



Efficient Water Rates

Pre/Post Consumption Comparison



Conclusion – Implementing Market Transformation

- ▶ Good implementation of MT requires:
 - studying efficient products and practices,
 - studying existing market and market actors,
 - identifying market barriers,
 - documenting outcomes,
 - sculpting actions to match the maturation of the market, and
 - monitoring of results with an exit strategy in mind.
- ▶ The specifics of strategy implementation depend critically on the product.

Designing Market Transformation

- ▶ Design of MT must be done on a product-by-product basis— one size does not fit all.
- ▶ To illustrate the point, the Case Studies of the white paper document the importance of particulars:
 - Efficient Pre-Rinse Spray Valves went from nowhere to an 80 percent market penetration rate in a few short years due to
 - a) a narrow focused market (commercial kitchens)
 - b) the direct install program delivery design
 - c) sufficient or improved product performance as assessed by users
 - Compact Fluorescent Lighting has undergone a more than decade-long MT effort that still struggles due to
 - a) a broad diverse market for lighting products and applications,
 - b) no easy form of market intervention, and
 - c) the sensitivities and multiple dimensions to customer lighting preferences.

Punchline

- ▶ Evidence shows that Market Transformation is a valid strategy for Water Use Efficiency.
- ▶ Principles of MT taken from field experience in energy can be applied to WUE, and, if administered correctly, will deliver successful results.

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