

“So You Think You’re Smarter Than a
1980’s DSM Resource Planner!”

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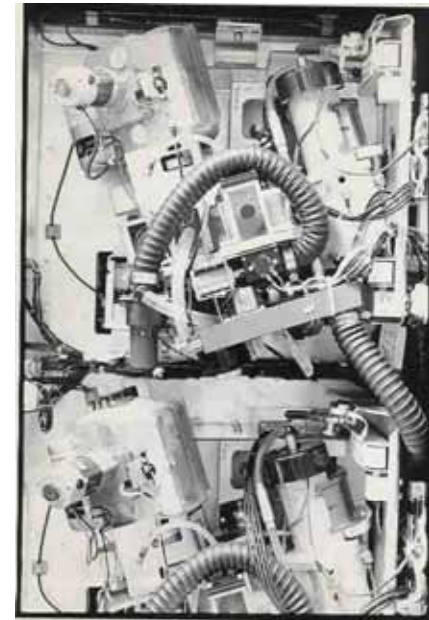
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What Did We Really Want to Be!



The Old Days—What We Had to Work with!



Career Paths of Two DSM Planners

BONNIE at Northeast Utilities:

Manager—Consumer Research
(end-use research, statistics,
program planning, and
evaluation)



Load Research Statistician



CAROL at NYSEG:

Supervisor—DSM Analysis



Supervisor—Load
Forecasting & DSM
Assessment



Market Research Analyst

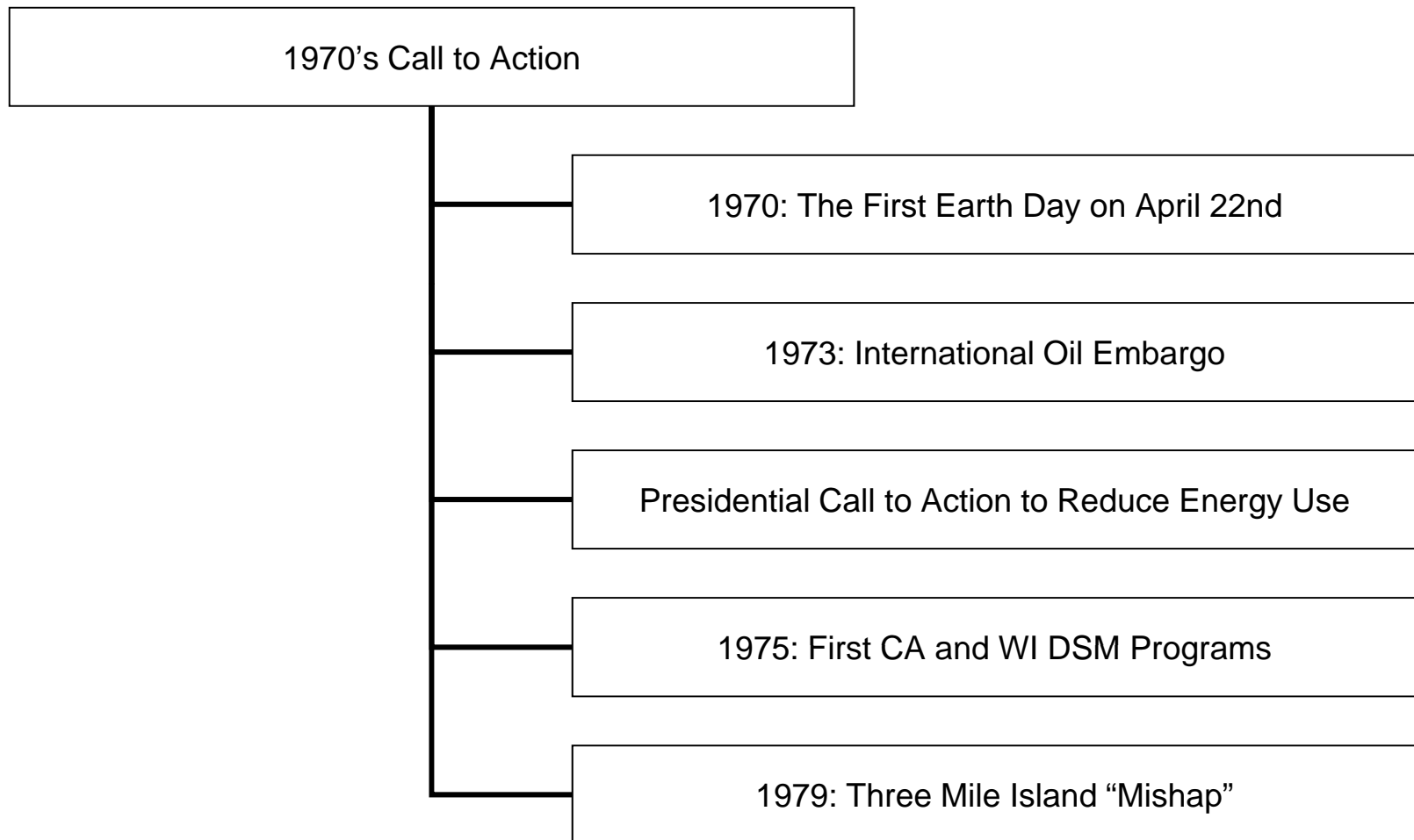


Technical Assistant—
Operations/Construction



Personnel Clerk Accountant

Progression of DSM Planning



Progression of DSM Planning

1980's: Regulatory Driven Plans Emerge

Early 1980's: NYS PSC Conservation Case #28223

1984: NU issues IRP; NYS PSC Orders Pilot Programs

1985: NU's Strategic Plan for 80/90's Programs

1987: NY utilities first DSM Plans

1988: NYS PSC Orders IRP Plans

Assessment of DSM

UCT → Used to determine rebate levels, but was limiting as to perspectives represented

No Losers (Non-participants) → RIM

All Ratepayers → TRC → Societal

Assessment of DSM

Problems:

- **Data Quality, especially when “borrowed”**
- **Terminology is confusing (energy savings, deemed savings, kW, kWh)**
- **Deregulation**
- **Lack of trust (demand planners vs. supply planners)**

Back to the Basics: Load Forecasting

First method employed-the Ruler method

- **Load growth was so consistent, you could straight-line the future**

Updated method-macro-economics

- **Used general data that described regions but not service territories**

Progression-micro-economics

- **Used general data that was more specific to service territory but did not look at end-use impact on system**

Forecasting Methods-continued

End-Use Models

Most useful for DSM assessment in planning

- Needed significant end-use and customer data that the utility did not have
- Major data collection began to support forecast and planning
- Little information available to predict customer acceptance of new/advanced DSM technologies

Planning progressed to utilization of enhanced supply and DSM evaluation methods via an integrated approach-IRP

Getting Good Data

Load Research data collected by Federal mandate for customer classes and sometimes for rate categories

- Lead to enhanced customer appliance saturation and housing surveys to understand the load shapes

Residential/Commercial/Industrial Audit Data

Bench testing of DSM technologies

DSM program data

Customer data collection to support end-use forecasting

Borrowed data

Issue: transferability of other utility data due to quality, applicability, manipulation capability

Solution: NORDAX

Northeast Region DSM Data Exchange (NORDAX)

- Began in 1987, with a \$75,000 grant from the U.S. Department of Energy through its LCUP (Least Cost Utility Planning) initiative to fill significant data gaps to support DSM planning
- Sponsored by 20 utilities who provided membership fees and data
- NORDAX database organized into four modules: (1) Utility Data Module; (2) Technology Data Module; (3) Program Data Module; and (4) DSM Personnel Contact Information Module
- The networking benefits were unprecedented—a utility planner could pick up the phone and get information from his or her counterparts at 19 utilities in the same region

NORDAX Shed Light on DSM Planning Problems—We Could Only Hope It Was Efficient Lighting!



Integrated Resource Planning (IRP) Models

- Not sensitive enough to handle specific DSM programs and impacts
- Models were not sensitive enough to see DSM portfolio impacts within the total plan
- Models often could not handle specific utility generation portfolios
- Models were black boxes and planner could not assess what calculations were really doing
- Models not really integrated

Customer Response to DSM

EPRI initiated research to understand DSM response via Customer Preference & Behavior Project

- Provided planner with means to estimate who would respond to various DSM
- Also provided planner with measures of response for future programs
- Planner needed specific utility data survey to use predictive models
- Formed a basis for new thought regarding how customers respond (often not how you expect)

What Have We Learned?

- The Best Practice for one utility may not be the Best Practice for another
- Involve the evaluation team early on in the EE/DSM program planning phase
- Be open-minded about the models being proposed by the EE/DSM resource planner
- Find opportunities to share load research or other EE/DSM program data
- Involve the people “who know” in the process
- Make sure you know the basis for the borrowed data you use

What Have We Learned-continued?

- Do not be afraid to use older research and data to guide your estimates for EE/DSM option planning
- Be creative in using your data
- Use varying modeling approaches when possible
- If you develop a comprehensive DSM database make sure there are others around you who are as wedded to the upkeep and updating of that data.
- Seek the wisdom and experience of “old timers” in the industry
- Befriend the supply planners. You need to gain their trust to be credible to them

What Have We Learned-continued?

- Involve the players who are stakeholders in your program into your planning activities
- When all else fails, make some phone calls to utility planners who have done it before
- Learn from your mistakes (along with those of others)
- When faced with several options for planning, the best is often the simplest
- Look to “old” research. Do good literature reviews to investigate your problem. Chances are, the “old timers” have already done the research.

What Have We Learned-continued?

- Be creative when using and developing your DSM planning data
- Buy a good pair of reading glasses

Moral of the Story

- We did good, creative work and research back “in the day” that you can draw upon today for your work!

- Talk to us “old timers” for advice on your current planning issues. We might have some useful ideas for you based on our past experiences!