Restructuring in Alberta and California

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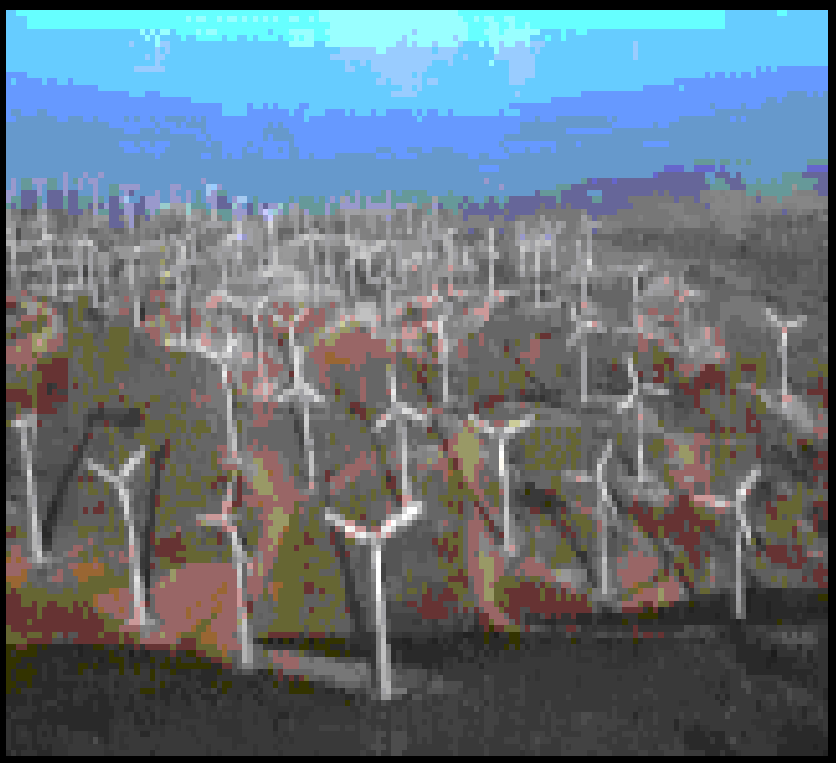
Renewable Resources Meet Godzilla



Overview

- Background
  - Terminology
  - WSCC
- California
- Alberta
- What should we do?

Where are they?

Alberta is the second province from the Pacific

California is right on the Pacific -- which explains the odd customs

Terminology

- MAIN
- WSCC
- Measurement of capacity
- Measurement of energy
- Mills

- Illinois
- West Coast
- Megawatts
- Terawatt hours
- One tenth of a cent

The Western States Coordinating Council

- The WSCC stretches from Baja California to Alberta
- WSCC currently has 153,000 megawatts of generation
- Most of the WSCC -- 63.2% -- is not California
- The spot WSCC market is approximately 15,000 megawatts

WSCC Innovations

- WSCC long term sales are prevalent
- Multi-state and multi-provincial transactions are also common
- WRTA is the nation's first functioning RTG
- Retail wheeling is occurring in numerous locations
- The first electric brokerage was founded in WSCC

WSCC Advantages

- Many buyers and many sellers
- Extensive backbone transmission
- Diversity of fuel supply
- Seasonal and diurnal diversity

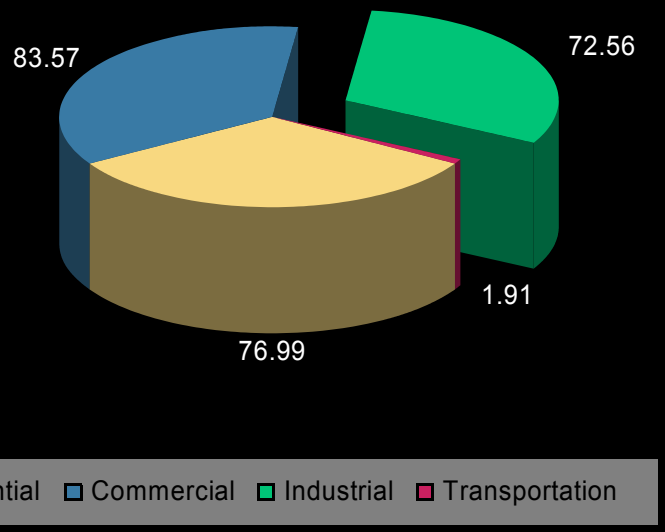
North America's Two Most Advanced Restructuring Debates

- California -- one year and counting of name calling, posturing, and delay
- Alberta -- quiet implementation

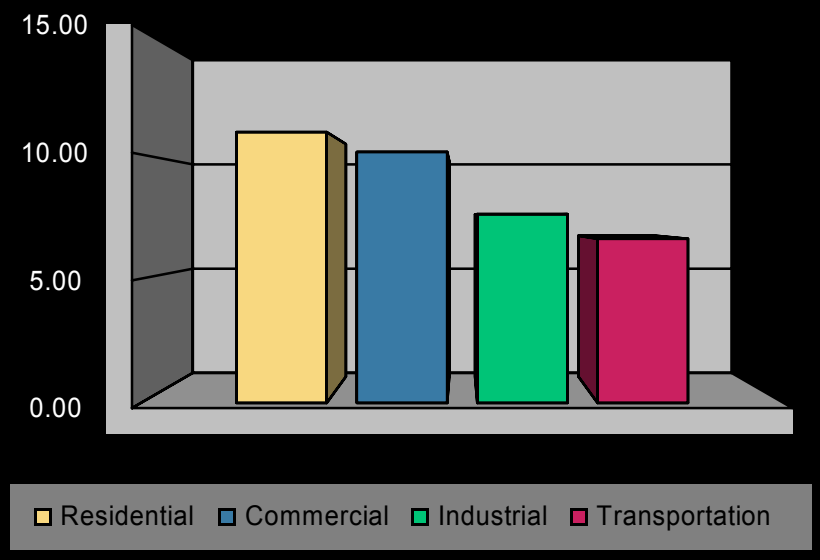
California's Electric Sector

- California currently serves 235 TWh
- California average rates are high -- 9.5 cents per kilowatt hour
- California is approximately 40% of the world's most vibrant wholesale electric market -- stretching from Alberta to Baja California
- California is the home to the truly "political correct" energy solutions

Loads In California



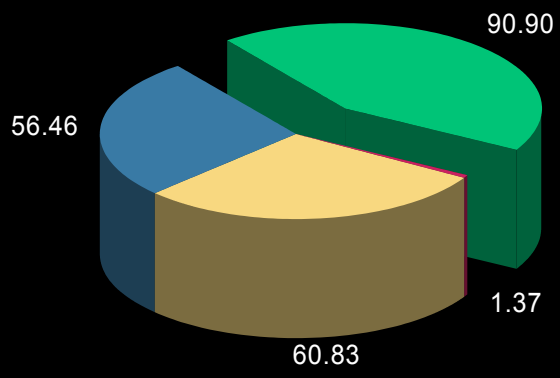
California Rates



By Way of Comparison

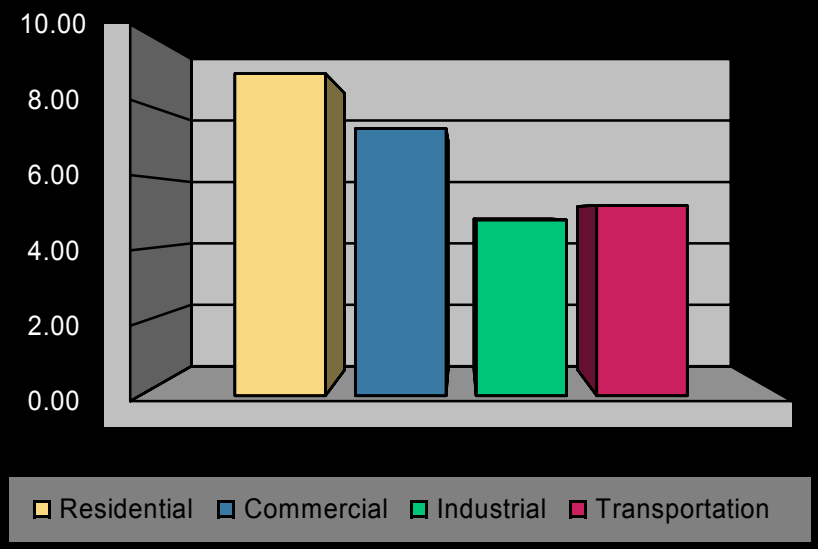
- Illinois (commonly known as "MAIN" in utility circles) has 206 TWh of loads
- Almost half the load -- 90 TWh -- are industrial
- Average rates are 6.6 cents per kilowatt hour

Illinois (MAIN) Loads



Residential Commercial Industrial Transportation

Illinois (MAIN) Rates



California's Original Proposal

- On April 22, 1994 the CPUC filed its famous "Blue Book" on electric restructuring
- Immediately following, many hearings took place
- Many briefs were filed
- Many postures were postured

Life In A Western Saloon Brawl

- Approximately 100 parties have intervened
- Most parties have chosen special interests to defend
- Notable are the U.S. Federal Government (4.5 positions) and the Hispanic League

Basic Positions:

- After some maneuvering two major positions have been defined:
- PoolCo
- Open Market

Open Market (also known as "Bilateral Contracts")

- Actors represent themselves
- Prices are free to move in response to market conditions
- Innovations in terms and conditions is rewarded
- Participation by publics, state and Federal agencies, and out-of-state utilities is automatic and simple

PoolCo

- Administratively set prices
- Complex inclusion/exclusion rules
- Set product definitions
- Participation by public agencies and out-of-state utilities is complex and will require extensive new law

The Cynical View

- PoolCo is a cry for delay. The mechanism is complex and the advantages are dubious. Implementation requires Federal and state law.
- The real question is access -- not markets -- and access is not a feature of SCE's proposals

Dueling Decisions:

On May 24, 1995 the CPUC issued two proposed decisions.

- "Direct Access"
- "PoolCo"

Comparing the Orders:

PoolCo	Direct Access
• Mandatory pool for IOUs	• No mandatory structure
• Voluntary participation by all other	
• No open access	• Open access after 1997
• Separate GenCo/Disco	• Separate GenCo/Disco

How are they alike?

- Disaggregation of utilities
- Provision of a Competitive Transition Charge
- Continued role for regulation

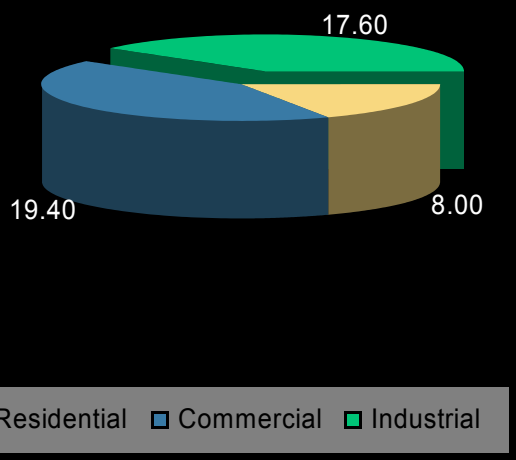
The Rumored Settlement

- Staged open access over time
- Some form of PoolCo
- Asset recovery said to favor SCE's system
- PG&E apparently is not a party

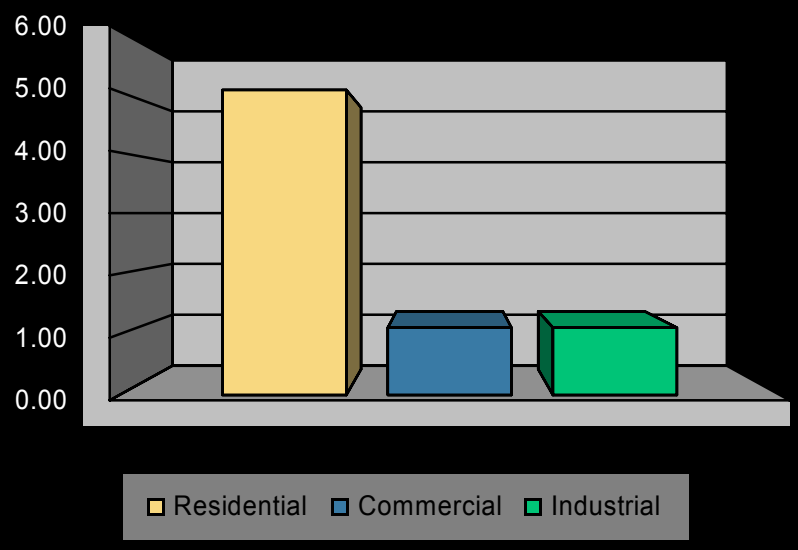
Alberta's Unique Canadian Organization

- Alberta contains a number of different utilities with both public and private ownership
- Alberta has had an active provincial power pool for many years
- Open market transactions are the rule rather than the exception

Alberta Loads



Alberta Rates



A Collaborative (not discursive) Process

Alberta interest groups have been working on this proposal for almost a year

- Electric Utilities Act was passed on May 17th
- Act becomes effective on January 1st, 1996

The Electric Utility Act E-5.5

- Provides competition for new generation
- Requires industry to operate as GenCo/DisCo
- All energy exchanged at pool price

Alberta Power Pool

- All energy is exchanged through the pool
- Operating rules will be set by October 1st
- System Administrator to be established by January 1st
- Non-discriminatory access for all parties

Transmission

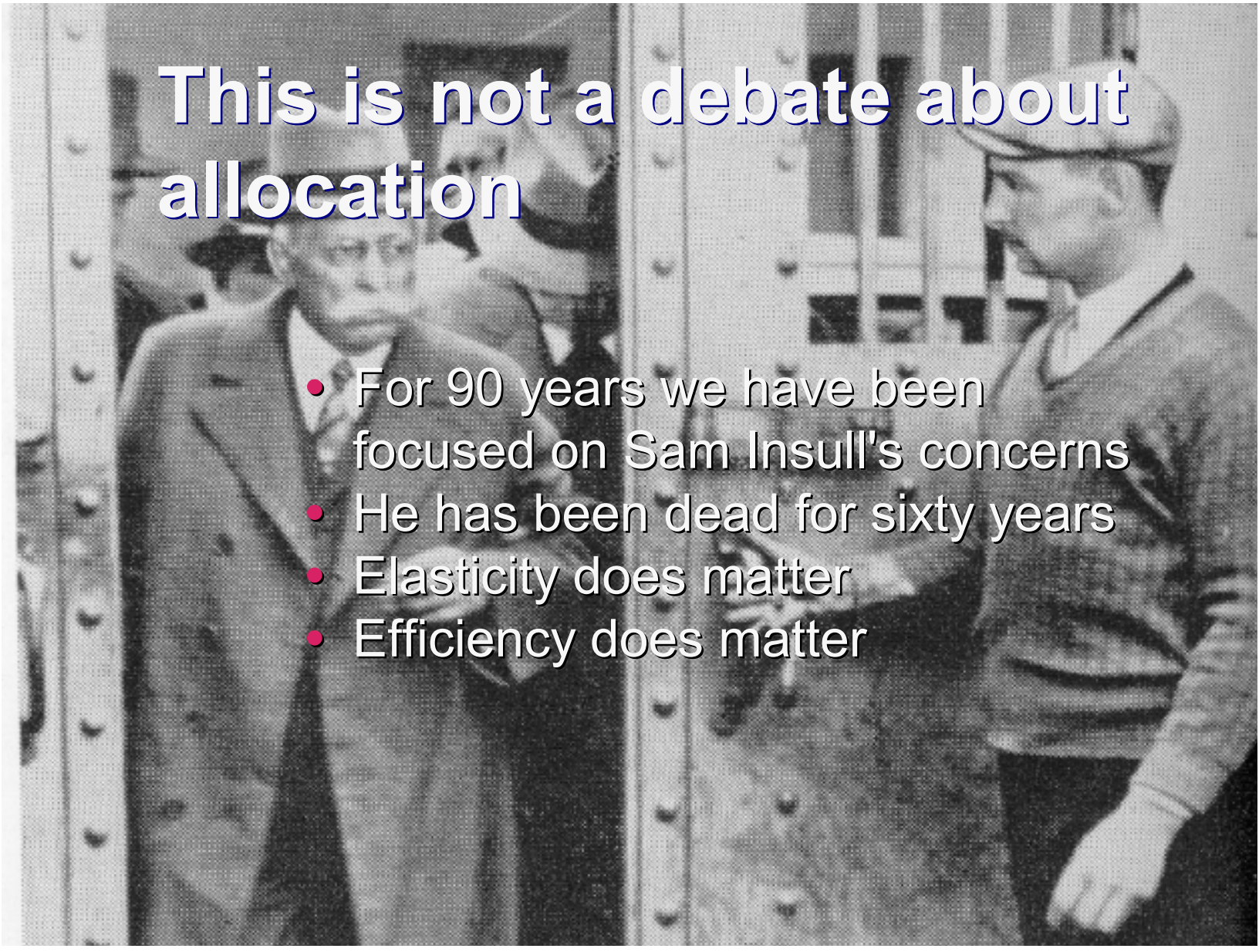
- Transmission Council to plan and operate
- Postage stamp rates
- Open access for utilities within Alberta

What should we do?

- Some things do not need to be managed
- This is not a debate about allocation
- Regulation can still add costs

Some things do not need to be managed

- Industrial rates are trending downward
- Interstate competition for industrial loads is a reality
- Electricity is the fuel of choice for most new industry



This is not a debate about allocation

- For 90 years we have been focused on Sam Insull's concerns
- He has been dead for sixty years
- Elasticity does matter
- Efficiency does matter

What is "elasticity"?

- Elasticity is the response of demand to price
- Utilities have learned -- at their peril -- to ignore price responses
- Price responses go both ways
- Estimates for industry range from -.2 to -.6

Why do we care?

- Elasticity increases the size of the pie
- More loads mean more revenues
- Low marginal costs mean rate reductions for all

An Example:

- Moving the Illinois average industrial rate to 3 cents/kwh will add between 14 and 31 TWh to the Illinois economy
- If these loads were in steel, this would add from 4,400 to 9,500 jobs with an annual wage bill of $220 to $477 million dollars a year

What is efficiency?

- Cost plus regulation has not always been a help to efficiency
- WSCC utilities post economy sales ten times as high as Illinois utilities
- WSCC economy sales are increasing dramatically
- Every "economy" kilowatt hour is a reduction in overall operating costs

Utility Operations Also Tend To Be Inefficient

- Integrated Industrial Cogeneration averages a 97% availability rate
- Utility plant averages an 81% availability rate
- One good reason for the difference is incentives -- economy sales are recaptured for the utility
- Downtime is penalized for the industrial

How big is the efficiency dividend?

- WSCC average energy costs are trending down towards 1.5 cents/kwh
- WSCC availability rates are increasing dramatically
- Based on EIA data, the efficiency dividend for WSCC is $2.745 billion annually for energy, $1.221 billion annually for capacity

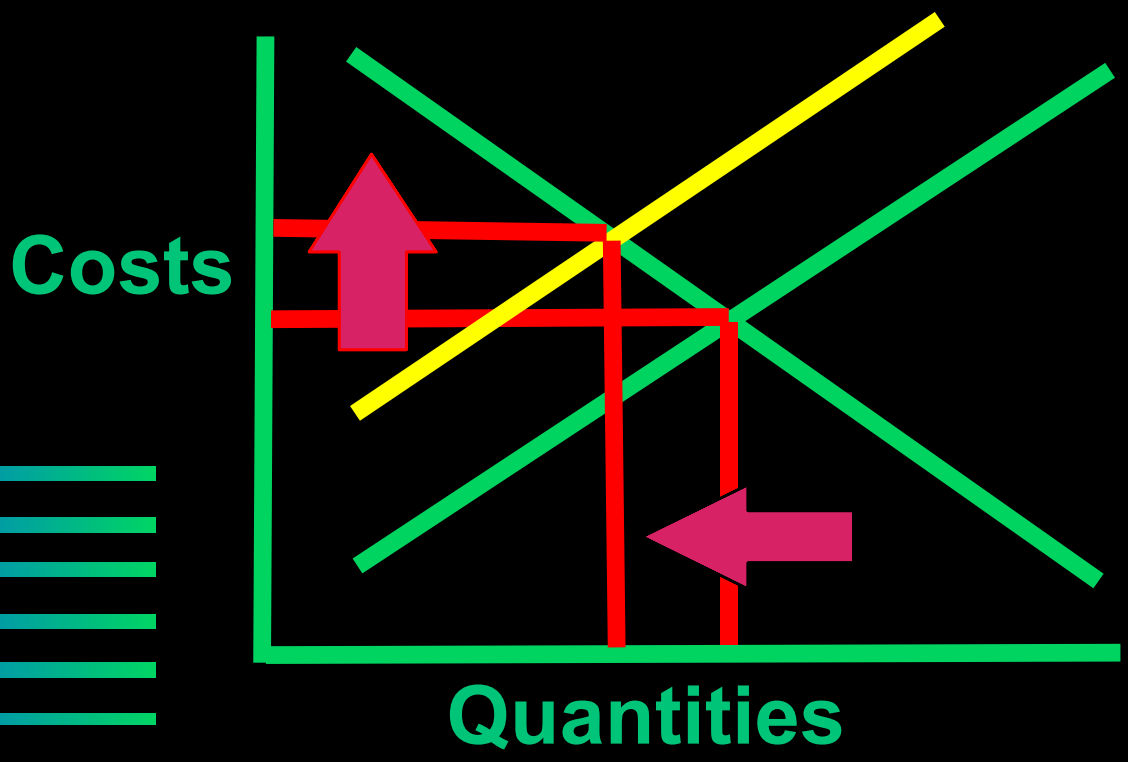
Regulation Can Still Add Costs

- Competitive Transition Cost (CTC) surcharges are usually directed at transmission
- Transmission charges are generally poorly understood, so a likely place for surcharge

Surcharges Affect Efficiency

- A six mill CTC will make economic displacement of uneconomic resources more difficult
- Eliminating economic displacement makes all parties poorer -- perhaps by as much as six mills

Spot Market Costs



Time Waits For No Man

- Change is inevitable
- Industrial rates are already in decline
- Efficiency benefits may yet be captured in larger loads and lower costs
- This, with work, we can still avoid