House Energy and Technology Committee
Joseph L. Welch, President and CEO
May 16, 2007

Public Act 141 of 2000

- The Independent Transmission Company Model

  PA 141 of 2000

  Sec. 10w (1) Each investor-owned electric utility in this state shall, at the utility's option, either join a FERC approved multistate regional transmission system organization or other FERC approved multistate independent transmission organization or divest its interest in its transmission facilities to an independent transmission owner.

- DTE divested its transmission assets in 2003
- CE divested its transmission assets in 2002
- In addition, both utilities joined the MISO Regional Transmission Organization so that the scheduling of the transmission system is no longer performed by market participants.

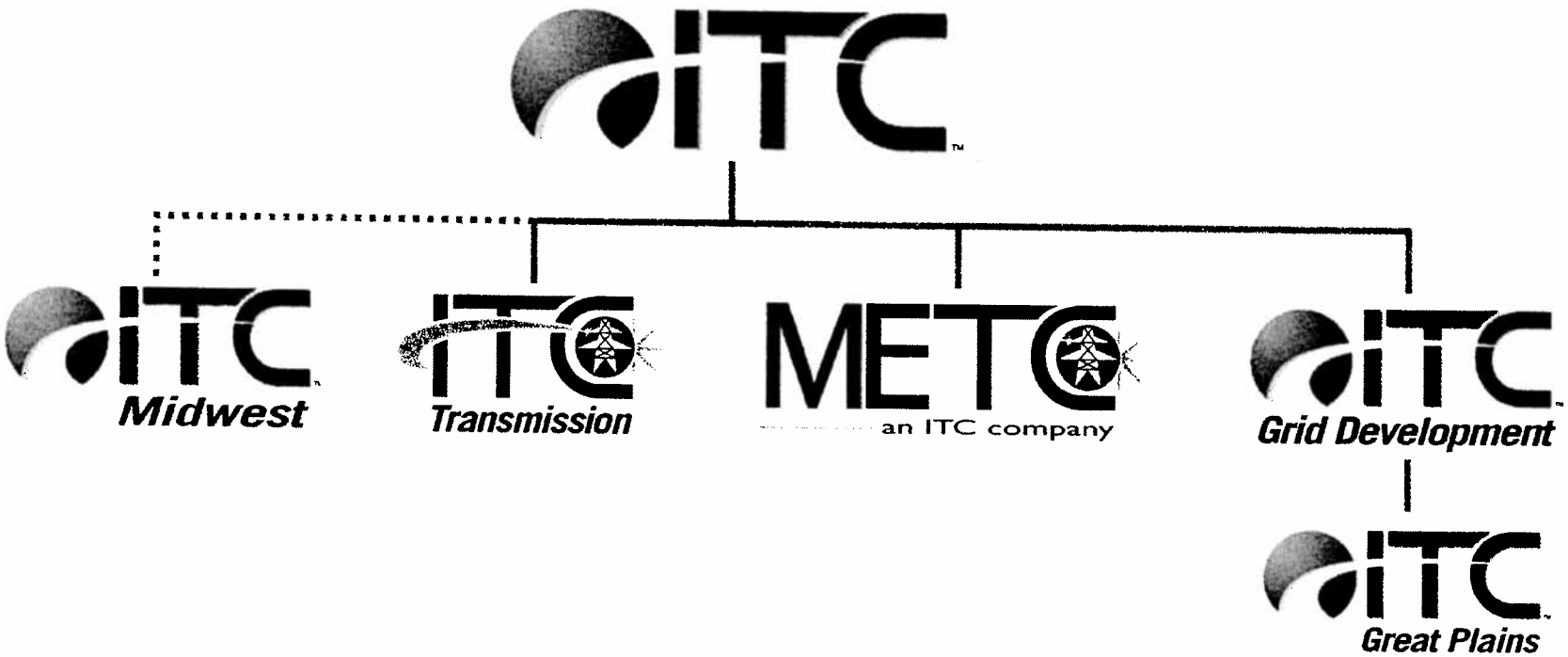
ITC

Who Is ITC?

ITC

Who is ITC?

- ITC and its subsidiaries are in the sole business of investing in and operating electricity transmission as a means to improve electric reliability, reduce congestion and lower the overall cost of delivered energy by increasing access to generation.

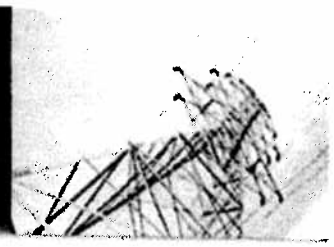


ITC Holdings Subsidiary Comparison

	ITC Transmission	METC an ITC company	ITC Midwest *
System Peak Load	12,745 MW	9,469 MW	3,123 MW
Service Area	Southeastern Michigan	Lower Peninsula of Michigan	Iowa, and portions of Minnesota and Illinois
Total Transmission Miles	More than 2,700	Approximately 5,400	6,791
Stations	155	81	Approximately 170
Interconnections	16	21	Approximately 160
Membership	Midwest ISO	Midwest ISO	Midwest ISO
Became ITC Holdings Subsidiary	March 1, 2003 (DE footprint)	October 10, 2006 (CE footprint)	Definitive agreement signed January 19, 2007; Acquisition closing expected fourth quarter 2007

* Assumes closing of acquisition of transmission assets from Interstate Power and Light Company (IP&L).

Lack of Industry Investment



Underinvestment

Decline in transmission investment

$12.8 Bn decline from the 10-year period 1975-1984 to the 10-year period 1992-2001 (1)

Demand Growth

Growth in electricity consumption

Annual demand has doubled From 1975 to 2001(2)

Outage Costs

- Costs from August 2003 blackout:

  $4 - $10Bn

- Annual lost production costs to U.S. businesses:

  $46Bn in power outages
  $6.7Bn in power quality issues (3)

Estimated investment required to modernize the grid:
$50 - $100Bn (4)

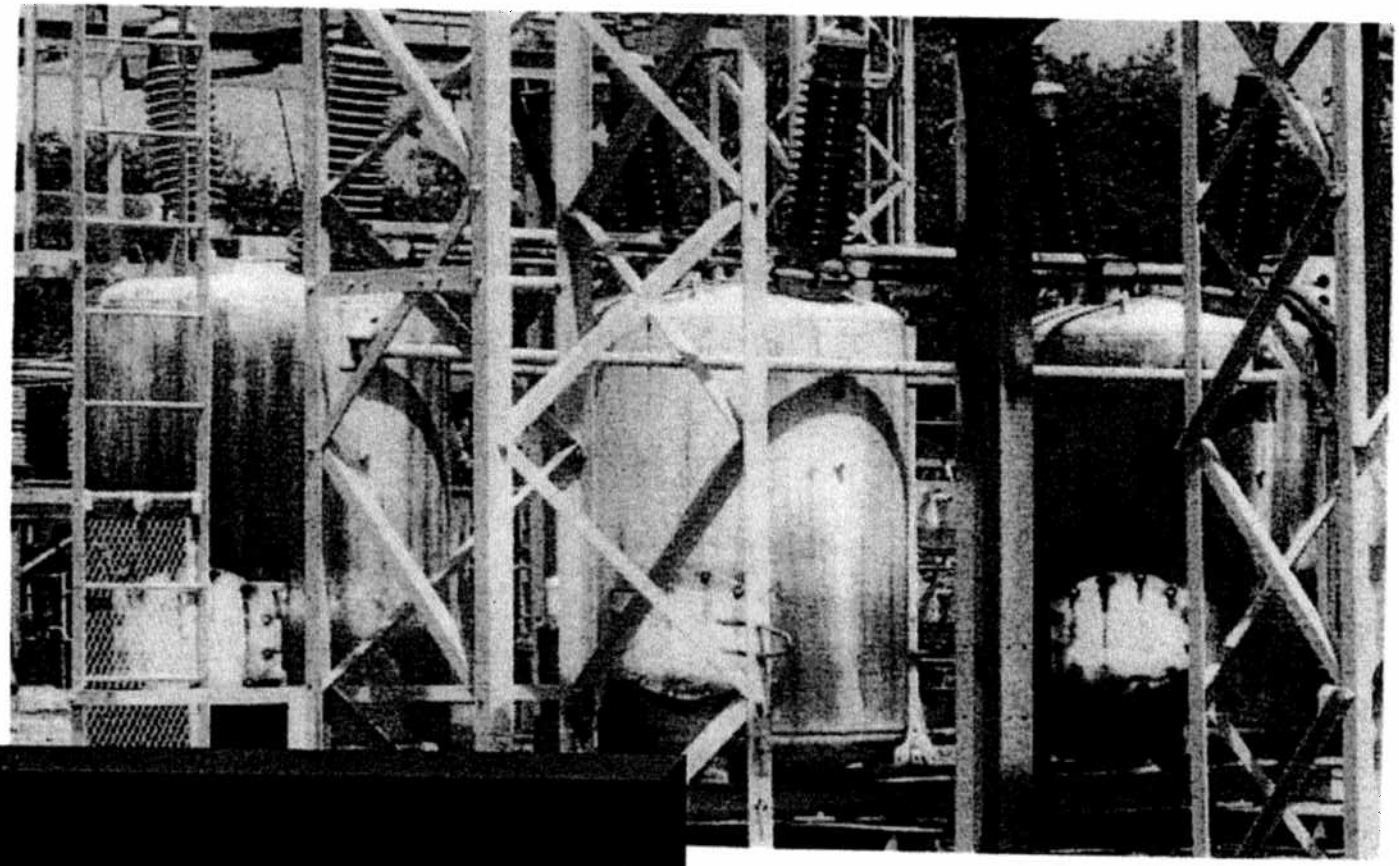
(1) According to the Edison Electric Institute ("EEI"). Figures are quoted in 2003 dollars.
(2) According to Department of Energy ("DOE"), annual electricity consumption more than doubled from 1975 to 2001.
(3) According to Electric Power Research Institute ("EPRI").
(4) According to a September 2004 DOE study regarding cost of power interruptions to U.S. electricity customers.

ITC

Impact of Underinvestment

[redacted]

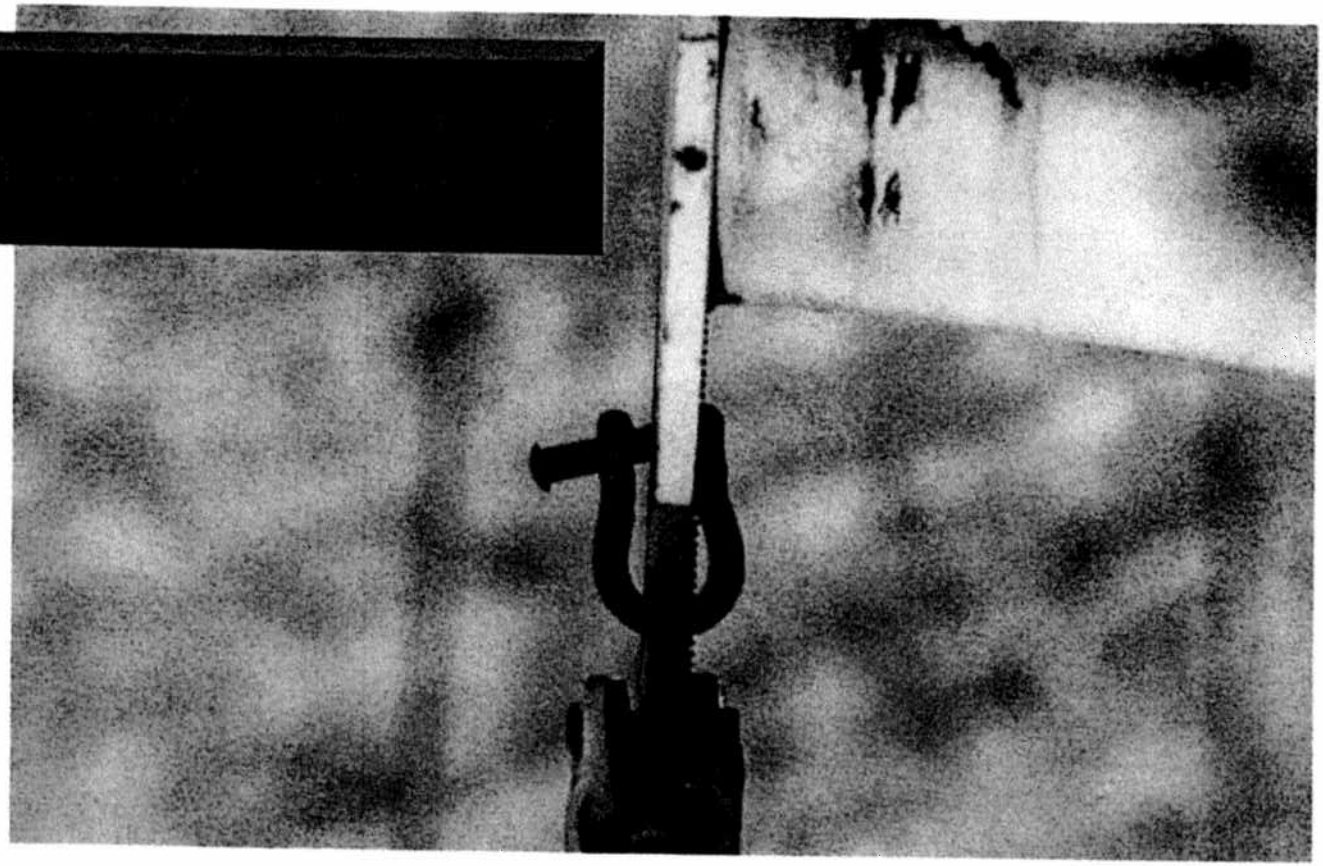
Impact of Underinvestment



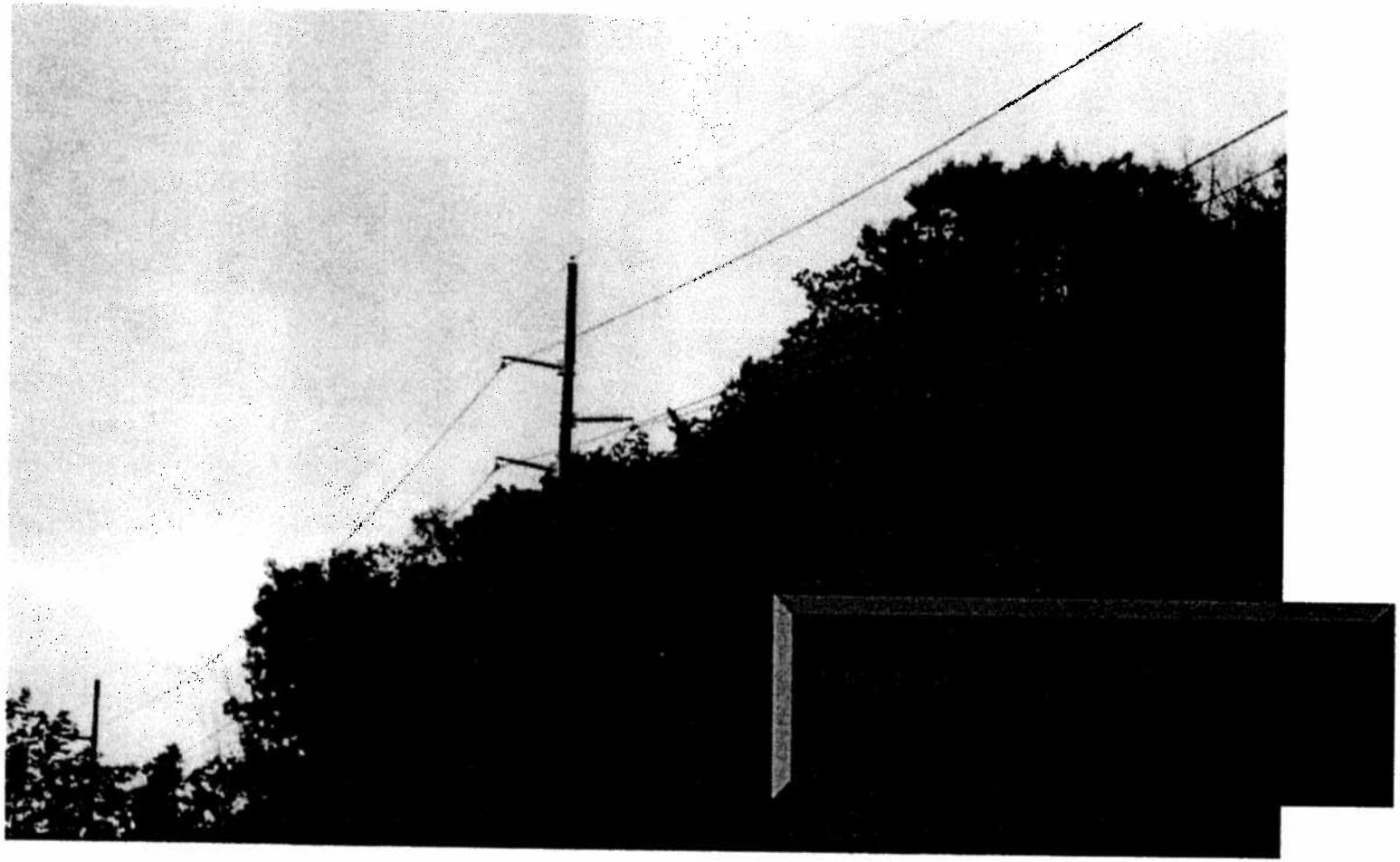
[redacted]

Impact of Underinvestment

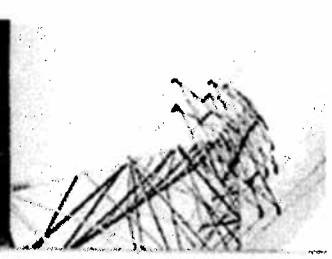
[redacted]



Impact of Underinvestment



Investment is Needed



- Investment in Michigan's infrastructure is sorely needed, and much remains to be done. The existing grid was mostly constructed in the 1970's and is now more than 30 years old.
- Investment is focused in 2 main areas:
  - Maintenance to replace and restore aged and broken infrastructure, in order to prevent deterioration of existing equipment performance and reliability
  - Investment to increase transmission capacity.
    - Improves reliability.
    - Eliminates congestion or constraints on the grid.
    - Promotes a "self-healing" grid that doesn't require heroic operating schemes.
- **In S.E. Michigan, ITC has invested over $580 million in last 5 years**
  - Increased transfer capability and access to new generation within the state (ITC/METC Interface Project)
  - Improved reliability while reducing congestion
  - Example - Jewell Spokane Project – One time $8 million investment reduces generation costs by $60 million annually in S.E. Michigan.

ITC

Improved Maintenance, Efficiency

- Our maintenance methodology is simple: invest in prevention.
- When we assumed responsibility for the ITC*Transmission* system, the backlog was approximately four years behind with some areas being up to 15 years behind.
- Now, we have a backlog of approximately 1.5 years and are working to eliminate it completely.
  - Once the backlog is eliminated, we will remain committed to ongoing preventative maintenance.

Breaker Inspections	28	82	96	58
Bus Inspections	6	51	81	60
Relay Complete Periodic Maintenance	10	176	354	526
Tower Inspections	857	1,441	1,442	2,212
Tower Painting	147	1,095	3,500	0
Infrared Inspections	153	153	154	157
Transformer DGA	43	71	62	96
Line Clearance / Corridor Mowing	95%	105%	100%	100%

* ITC*Transmission* became a stand-alone transmission company on March 1, 2003, following divestiture from DTE Energy.

METC Maintenance Assessment

- Since acquiring the METC assets in October 2006, METC has been actively reviewing and assessing the condition of the METC system.
  - Result: A tremendous amount of maintenance will be needed to improve the system

- Since taking over operational control of the METC assets from Consumers on May 1, 2007, we have now begun to implement our extensive and preventative maintenance program.

- Significant capital investment will be necessary to improve overall reliability, known voltage problems, transfer limitations, etc.

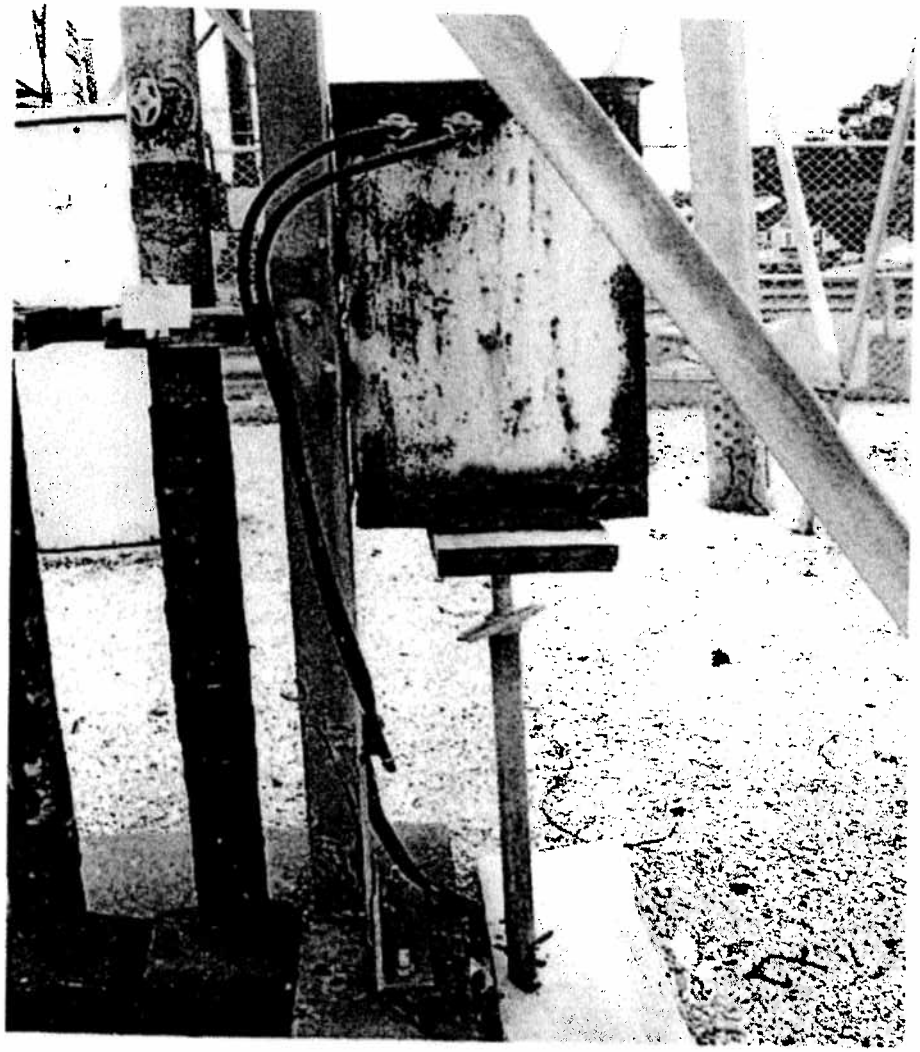
- Over 100 new employees have been hired for field operations and maintenance to improve the METC system. More employees will be added with the METC capital improvement program.

ITC

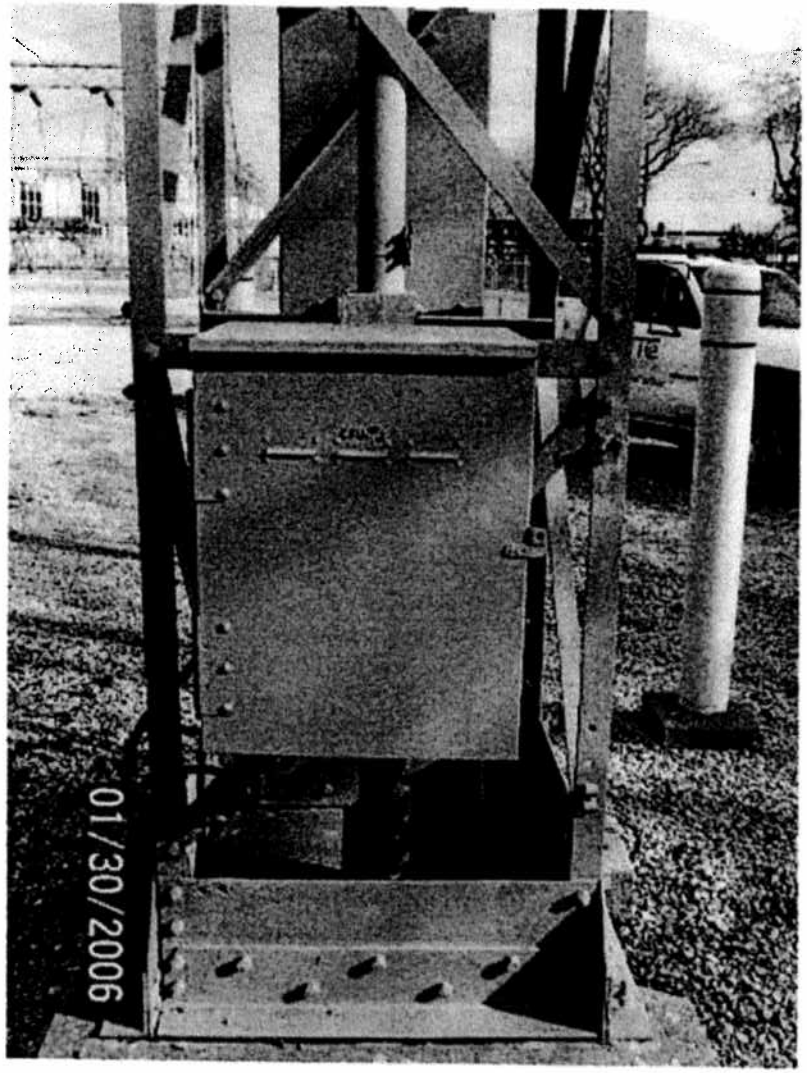
Before / After Photos

iTC

Before: Polar Cell



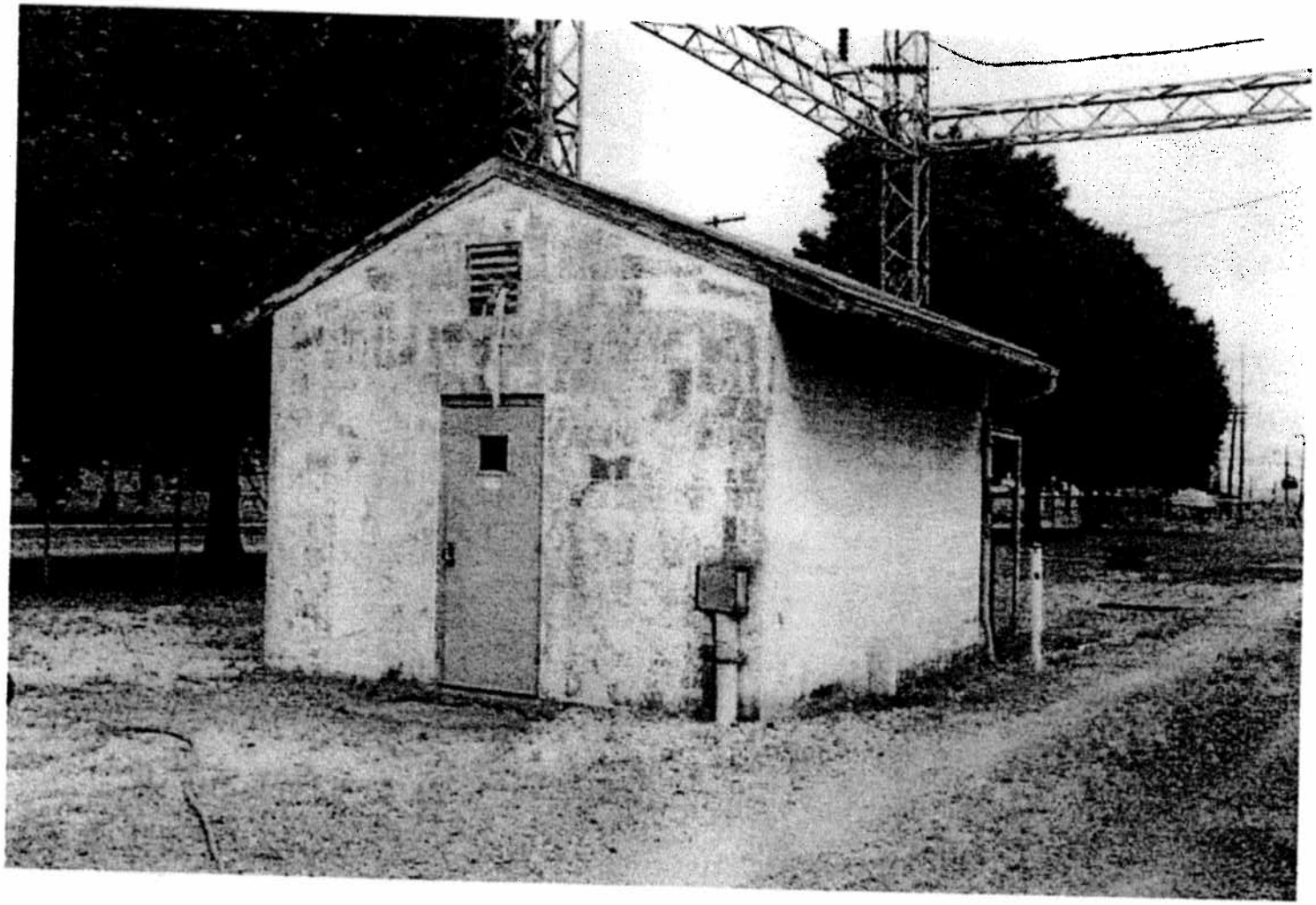
After: Polar Cell



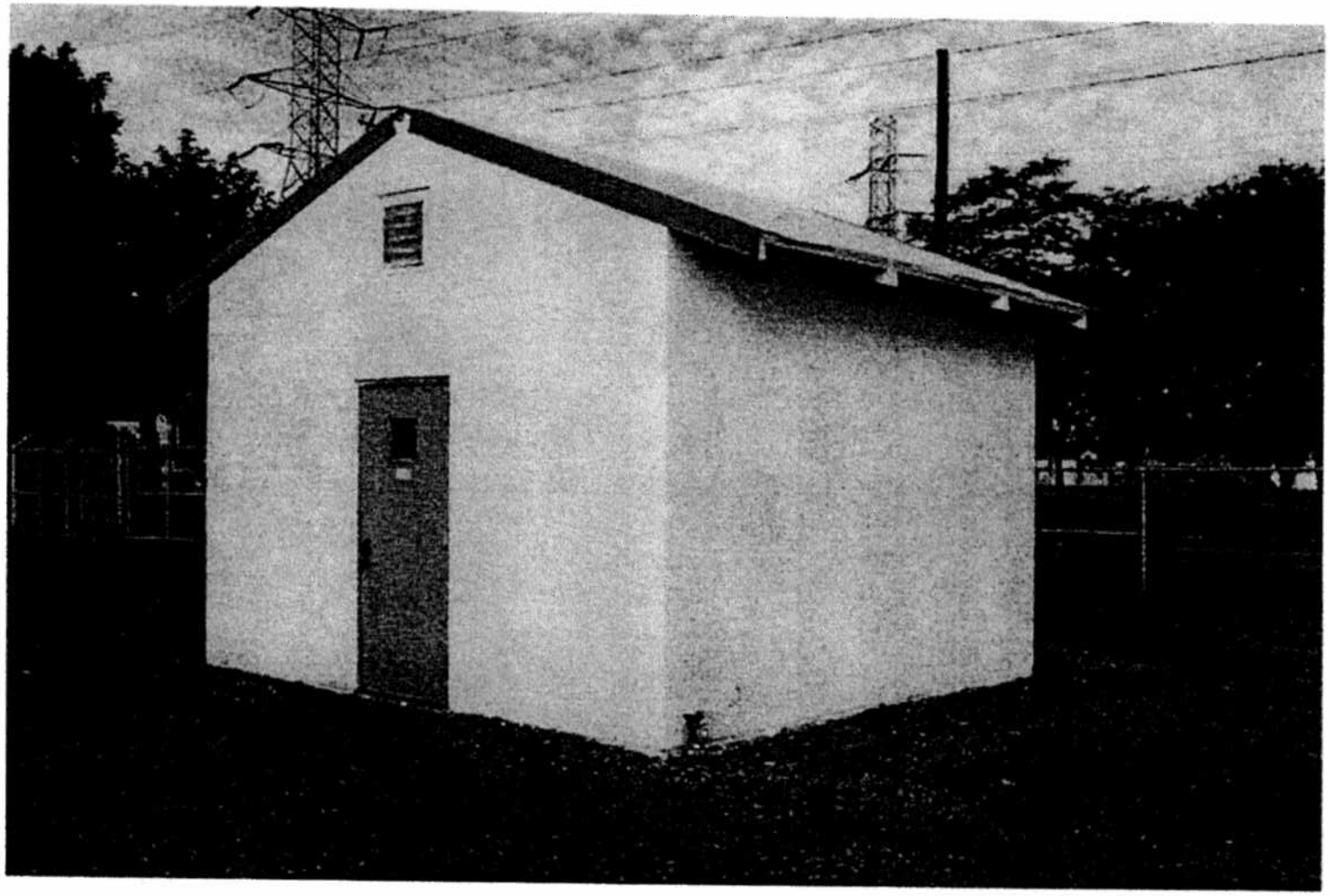
Before: Vegetation Management

After: Vegetation Management

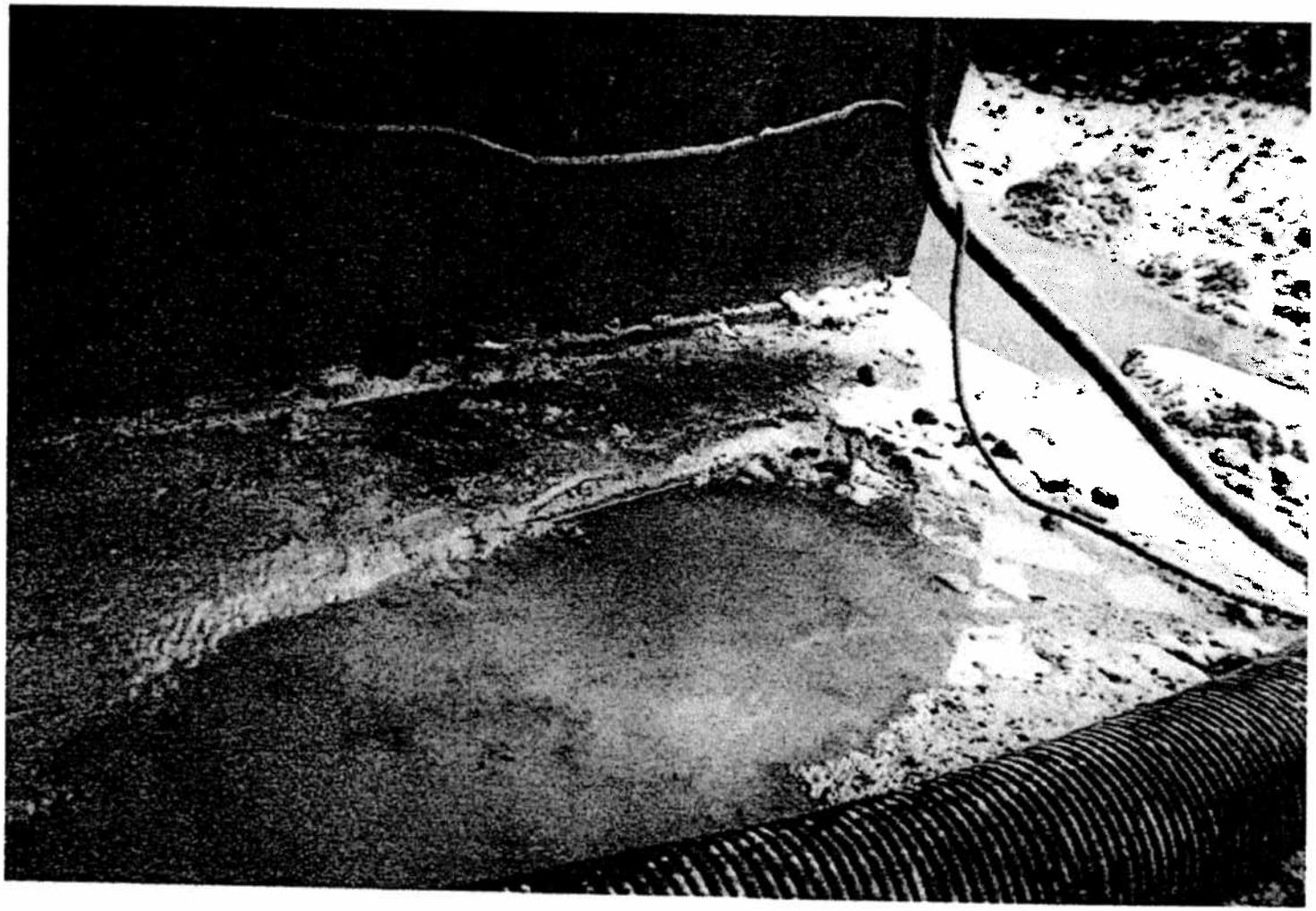
Before: Switching House



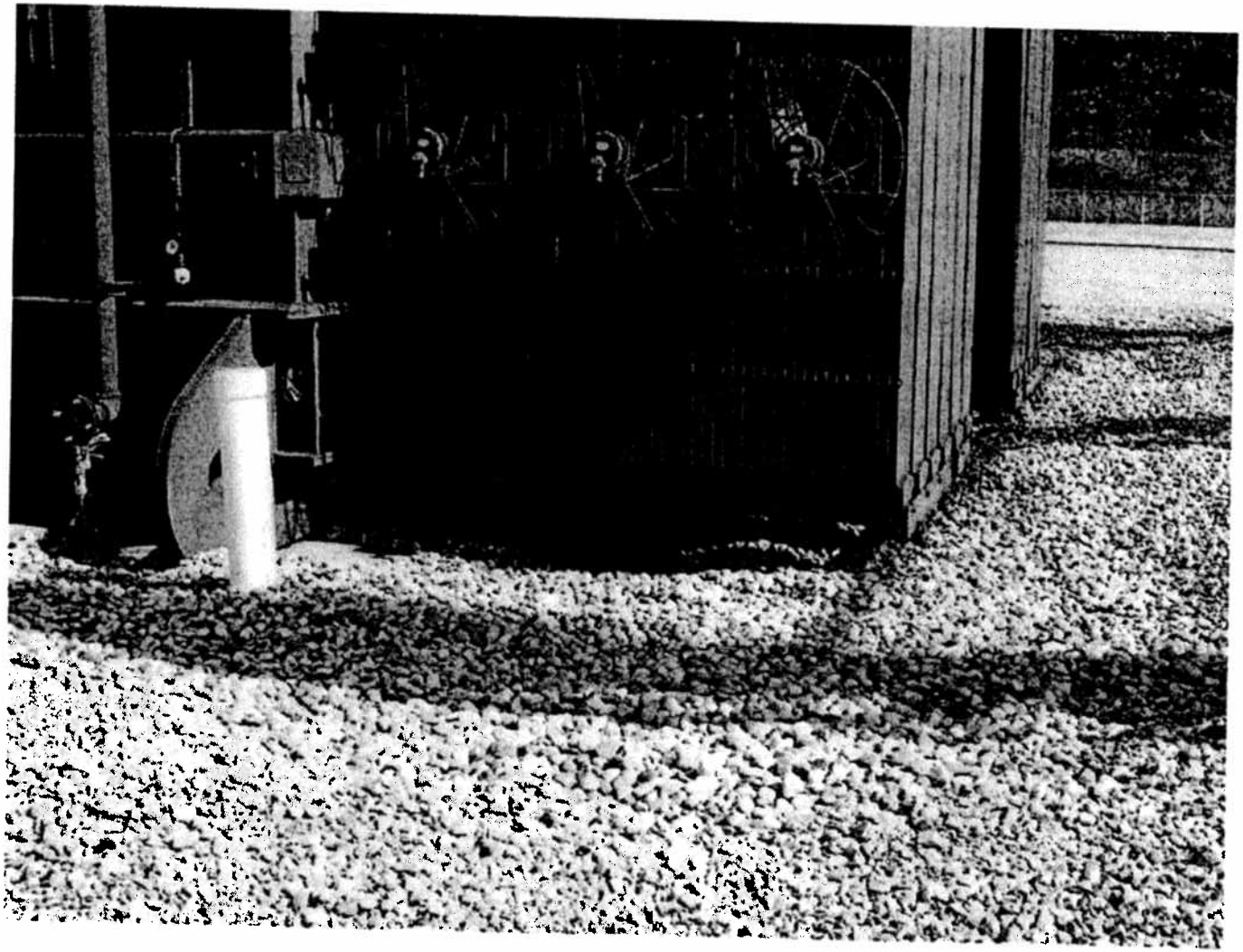
After: Switching House



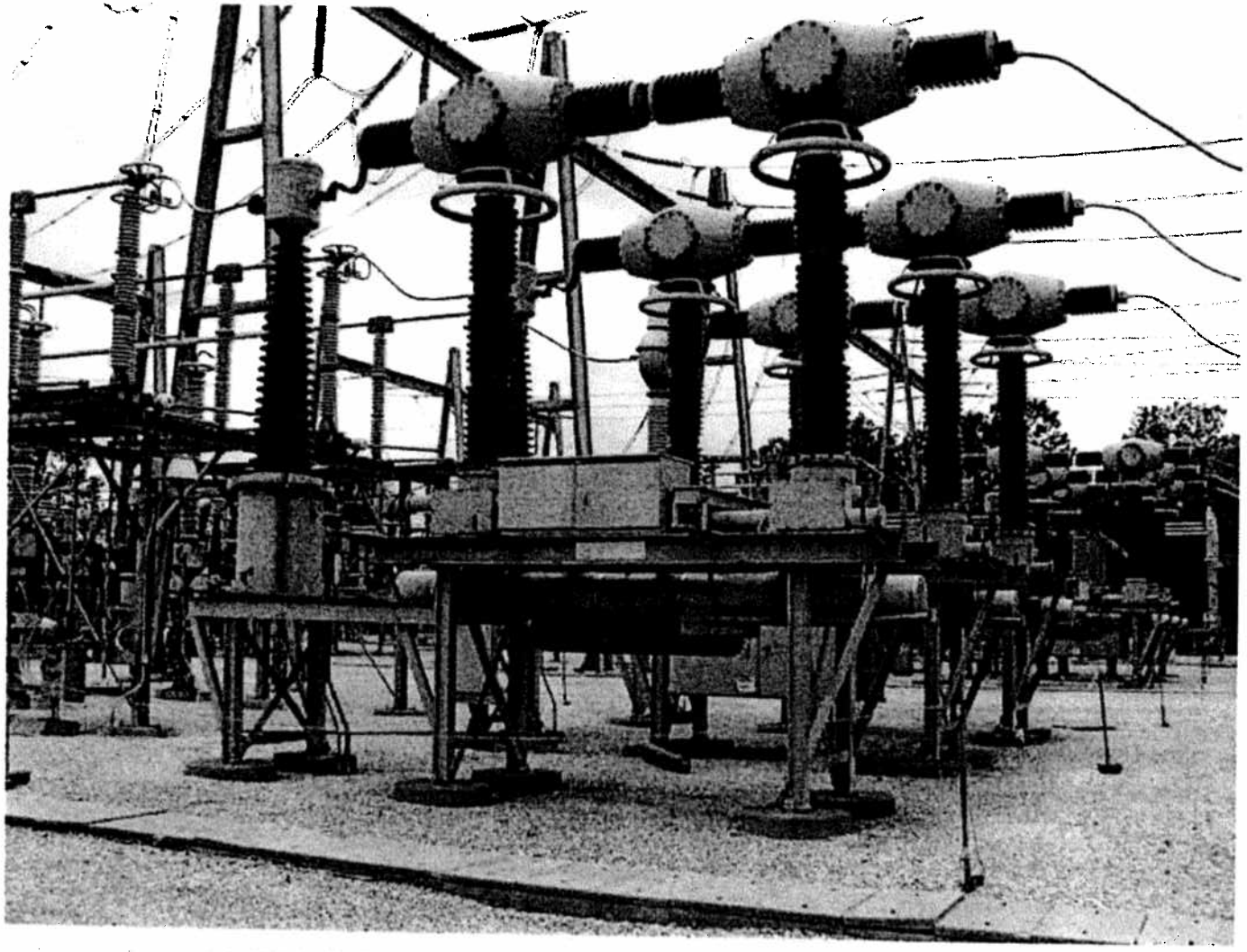
Before: Oil Spill



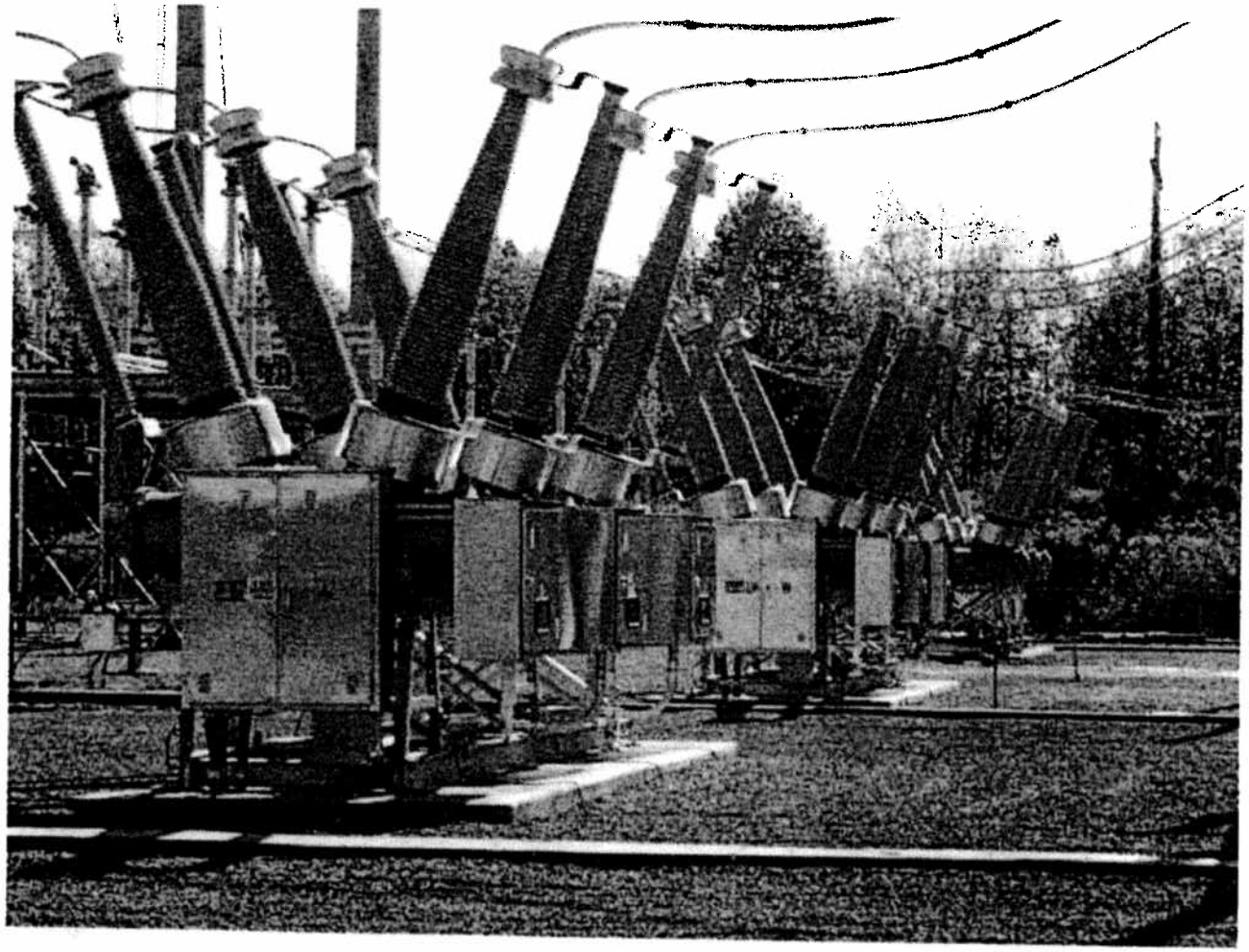
After: Oil Spill



Before: 345kV Breaker



After: 345kV Breaker



21st Century Electric Energy Plan

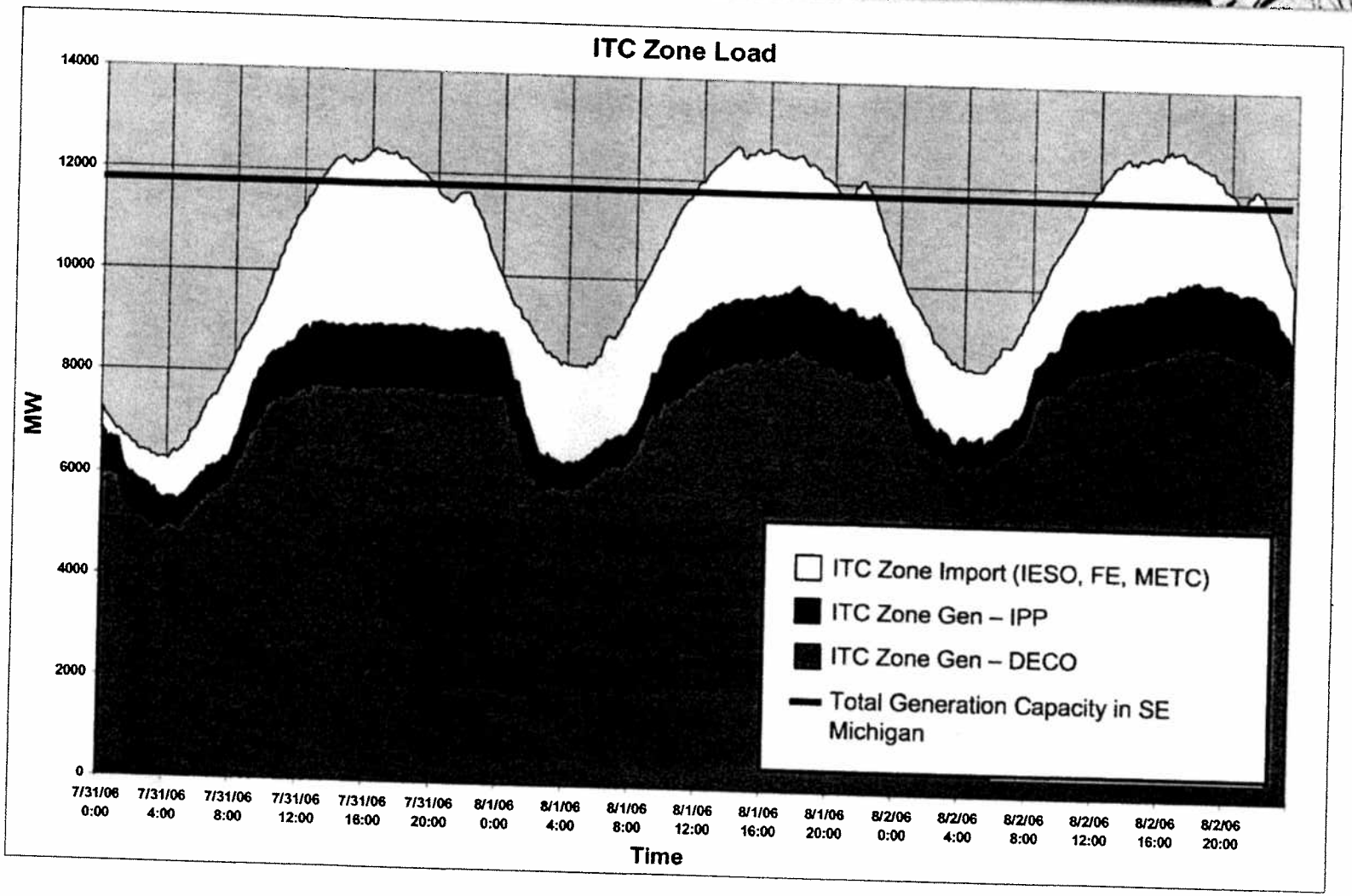
ITC

21st Century Electric Energy Plan

- ITC is generally supportive of the 21st Century Energy Plan. It is a step in the right direction specifically in the areas of renewable energy resources and wind generation.
- Transmission plays a crucial role in meeting Michigan's current and future energy needs but is critical to ensuring reliability.
- Reliability is only assured through transmission. Generation provides energy but the transmission system provides the instantaneous backup when generators fail.
- The 21st Century Energy Plan fails to address operational performance and efficiency standards for generation plants
  - What was available but not running on August 14, 2003?
- The 21st Century Energy Plan asserts that without a comprehensive energy plan, Michigan will be left to the "vagaries" of the Midwest Independent Transmission System Operator (MISO).
  - Michigan had to rely on MISO and import energy to meet the demand and energy needs in July/August 2006. See Zone Load Chart.

ITC

ITC Zone Load During Summer 2006 Peak



Wholesale and Regional Energy Markets

- A wholesale competitive energy market has existed in Michigan for at least 15 years.
- Resources outside of Michigan have been relied upon since the 1960's to minimize the cost of energy supplies and to maintain reliability when generation suddenly drops offline.
- Michigan utilities buy and sell energy everyday in the regional marketplace. It is critical for customers to have access to regional markets both economically and for reliability.
- If PA 141 is repealed and "choice" is eliminated, access to regional markets is the only way of ensuring that customers always have access to the cheapest sources of generation.
- The transmission system is the means by which Michigan can reliably participate in the energy market and gain access to economic sources of electric generation.
- Renewables, like wind and other generation sources, are dependent on a robust transmission system. Transmission provides more siting options due to vast improvements in energy deliverability.
- Policy changes are necessary to bring the benefits of renewables to consumers.

ITC

Interconnection to Generation-Baseload and Renewables

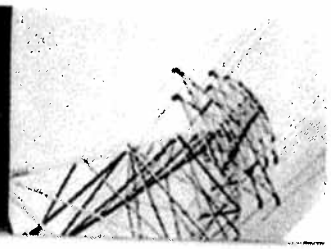
ITC

Current "Participant Funding" Mechanism

- The transmission network must be studied to determine if upgrades are necessary to accommodate increased power flows from new generators.
- Current MISO protocals approved by FERC allocate 50% of the transmission upgrade costs to the interconnecting generator(s) and 50% to the transmission company.
- The 50% interconnection cost represents a new cost for new generation resources.
- Policy puts new generation at a competitive disadvantage to incumbent utilities and alternative suppliers. It discourages wind and other renewable sources of generation due to the fact that these resources usually require significant transmission upgrades.
- Incumbent utilities already have passed through interconnection costs to their customers so a change in the interconnection policy would put all generators on a level playing field.
- A renewable energy producer has no regulated retail customer base and must include the network upgrade costs in the price of the energy sold creating a price distortion to the cost of incumbent generated energy .
- An integrated utility can collect the 50% interconnection cost through regulated retail rates and then be able to compete in the wholesale market on the basis of its low marginal cost of energy.

ITC

Fixing the Interconnection Problem



- ITC can file with FERC to revise its generation interconnection procedures to eliminate the 50/50 cost allocation formula for interconnections.
  - Change allows wind and other generation sources to become economically viable.
  - Change could make Michigan a commercially attractive location for the renewable generation industry.
- ITC would bear all of the interconnection costs of network upgrades and recover these costs from all of its transmission customers.
- State support would make FERC acceptance more likely; MPSC support is critical.
- The ITC proposal treats every generation source equally and avoids artificially discouraging some types of generation like wind and other renewables.
- In order for Michigan to achieve a 10% or other RPS standard, Michigan will need substantial contributions from wind, big wind farms that will have to rely on transmission and that transmission is critical for wind to work.

ITC

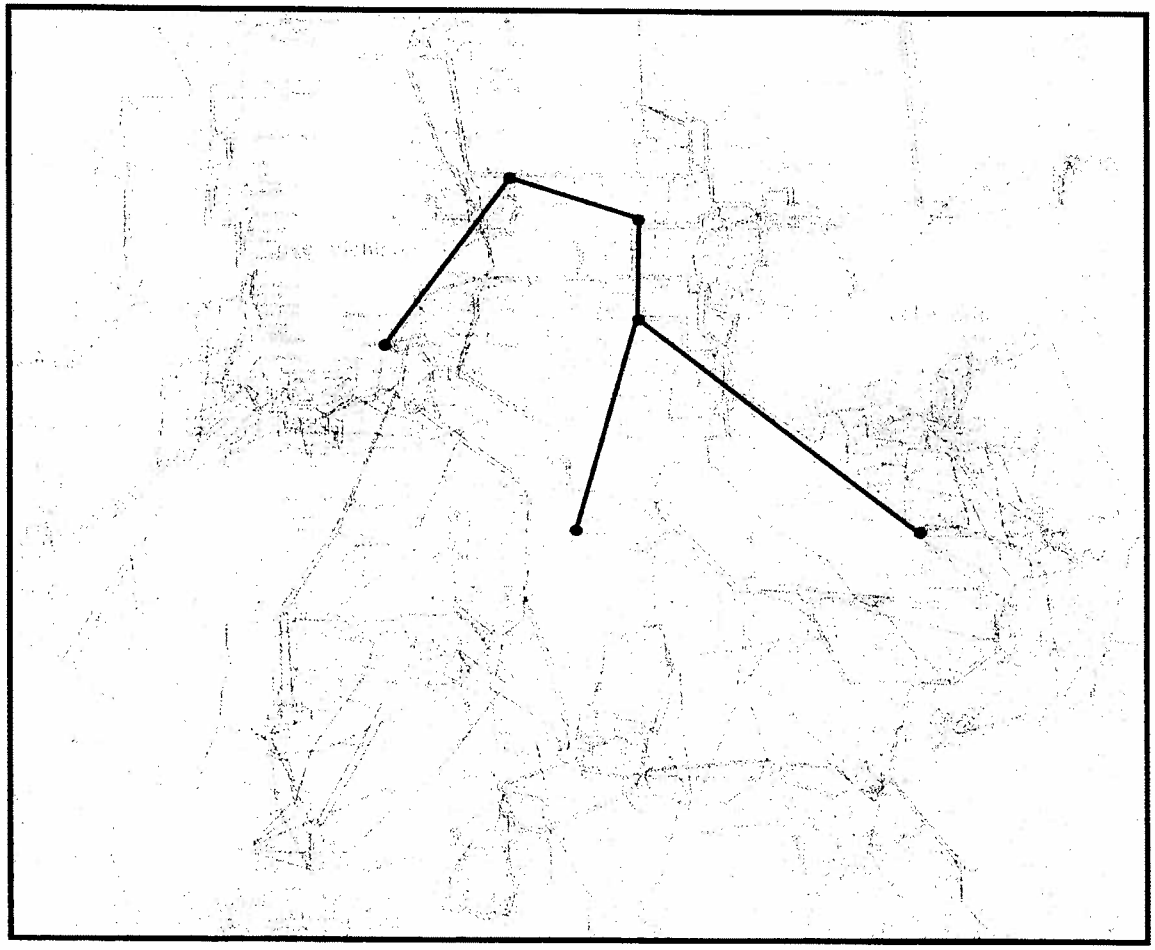
Joint Study with AEP to Build New 765kV Line

ITC

Joint Study with AEP for 765kV Line

- November 2006, ITC*Transmission* and American Electric Power (AEP) MOU to study feasibility of a 765 kV line.
- Study analyzes a complete 765 kV loop similar to a 765 kV line initially contemplated by DTE and CMS in the 1970's but never built.
  - The line would address problems identified in the Capacity Needs Forum report such as import capability, west to east transfer capability, METC's regional problems, and future growth and capacity needs.
  - A supergrid consisting of a 765 line supports and enables whatever generation source the State contemplates. It provides reliability, flexibility, security and capacity.
  - A 765 kV is comparable to the interstate highway system carrying heavy interstate traffic, unloading local systems and releasing capacity for local use.
  - The carrying capacity of a 765 kV line has 5 times the carrying capacity of a 345 kV line but minimizes use of the ROW.

Proposed Route for 765kV Line

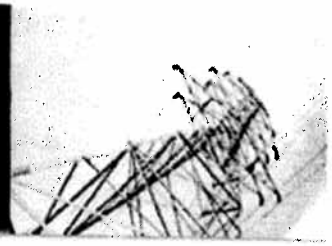


Additional Benefits

- A 765 kV loop provides unparalleled reliability and flexibility to address Michigan's future energy needs. Michigan is no longer an electrical peninsula.
  - Reliability: The 765kV AEP system did not go down during the 2003 Blackout.
  - Access to regional markets, both **to** and **from** Michigan.
    - Eliminates bottlenecks and congestion that prevent consumers from accessing the lowest-cost generation;
    - 765 kV line improves inter-regional capability and allows greater access to regional markets to buy and sell electricity
  - Access to remote generation sites (such as wind, hydro, biomass etc.).
    - Without new transmission, consumers cannot access new generation capacity, including renewables.
- It is cleaner and more efficient to transfer electrons by wire than transporting coal by railcar. Transmitting electrons via high voltage creates losses of on 1 1/4 %.

ITC

Additional Benefits, cont.



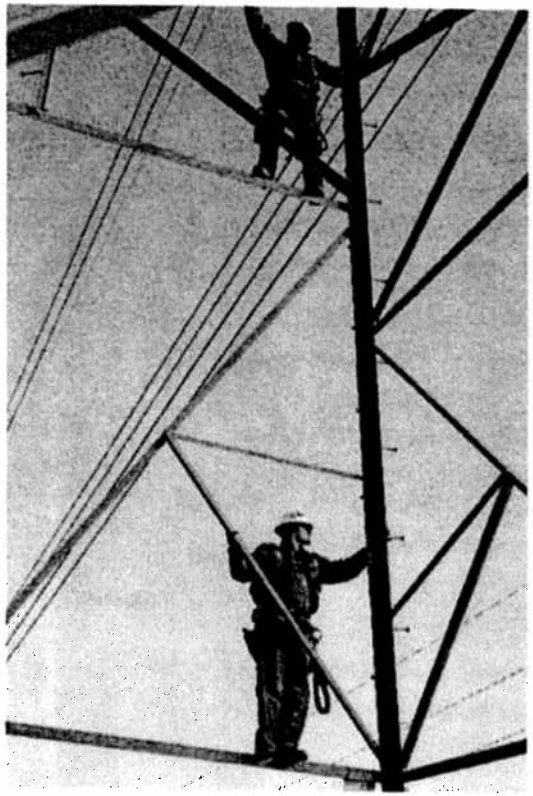
- A dependable, reliable energy infrastructure sends a signal that Michigan is serious about economic development which will attract and retain industry, create jobs and help ensure Michigan's economic future.
- The 765 kV line can be tapped at strategic locations within Michigan, Indiana, and Ohio, providing "off-ramps" to enhance local reliability as well as "on-ramps" to accommodate new generation.
- Estimates that the 765 kV project would result in roughly 300 MW of line loss savings at peak -- this is the ultimate in "green power".
- 765 kV loop is a robust solution that addresses just about any future scenario.
  - A 765-kV overlay in Michigan provides a significant capacity expansion.
  - Integration with AEP's 765 kV avoids a need for excessive new line redundancy, minimizes cost and maximizes benefits.
  - Michigan's grid becomes "self healing" with the capacity margin needed for reliability.
- April 19, 2007 FERC decision on transmission cost allocation for new PJM-planned reliability and economic projects for facilities of 500 kV and above states project costs "should be shared on a region-wide basis".
  - Region-wide postage stamp rate

ITC

Summary

ITC

Conclusion



- Transmission provides reliability and access; generation provides energy.
- A robust transmission system is critical to bringing the benefits of wind and all other generation sources to Michigan customers.
- The "participant funding" formula for generation interconnection must be changed to encourage development of wind and all other generation sources to meet future demand.
- A 765 kV loop represents a decisive step towards stabilizing Michigan's electricity future over the longer term.
  - Enhanced regional reliability and security, promoting a "self-healing" grid.
  - Leverages the existing 765kV transmission infrastructure to facilitate future expansion.
  - Provides additional capacity for future needs, minimizing need for future rights-of-way.
  - Permits a robust, wholesale competitive market to flourish.
- If PA 141 is repealed and "choice" is eliminated, access to regional markets is the only way of ensuring that customers will always have access to the cheapest sources of generation.
- We look forward to working with you to develop policies to encourage a robust wholesale energy market and transmission system to serve Michigan's customers now and in the future.