



**Partners in Business Meeting
December 13, 2007**



Agenda



Introductions

- ❖ Jeff Dorr, Stakeholder Relations

ITC Transmission and METC Load Forecast

- ❖ *Henry Schwab, Load Forecasting*

ITC Transmission and METC 2008 Capital Project Review

- ❖ *Ruth Kloecker, Planning*

LUNCH

Regulatory/Legislative Update

- ❖ *Tom Wrenbeck, Regulatory Strategy*

**Details Of The 2008
ITC/METC Demand Forecasts
For Attachment O**

Henry Schwab

Model structure



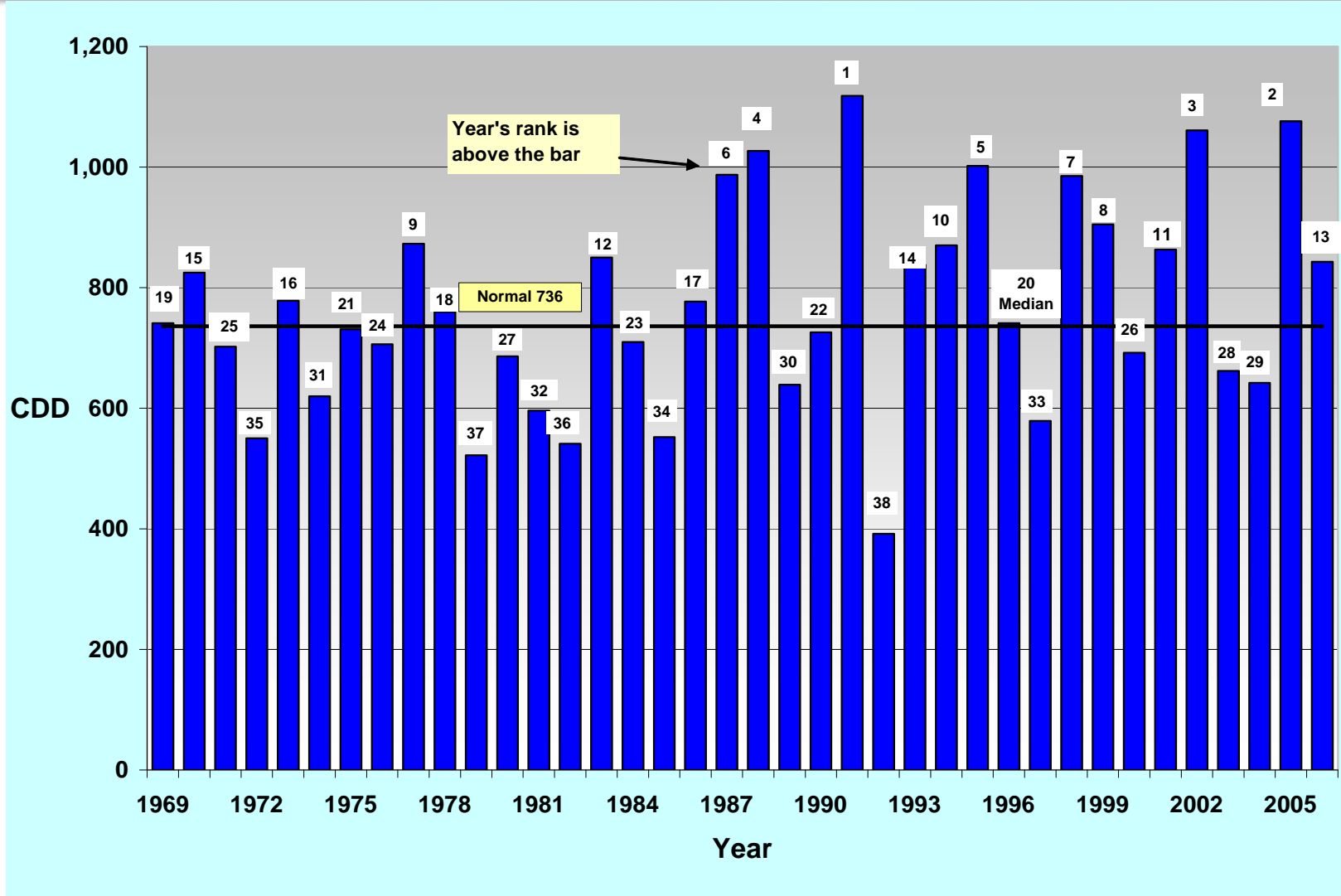
- ***ITC Transmission and METC models are short term***
- ***ITC Transmission and METC models incorporate:***
 - Weather factors
 - Calendar terms
 - Economic terms
- ***Model structures differ***
 - ITC Transmission models are separate **monthly** models
 - METC model is an **annual** model

Short Term Models Tend To Respond More To Weather

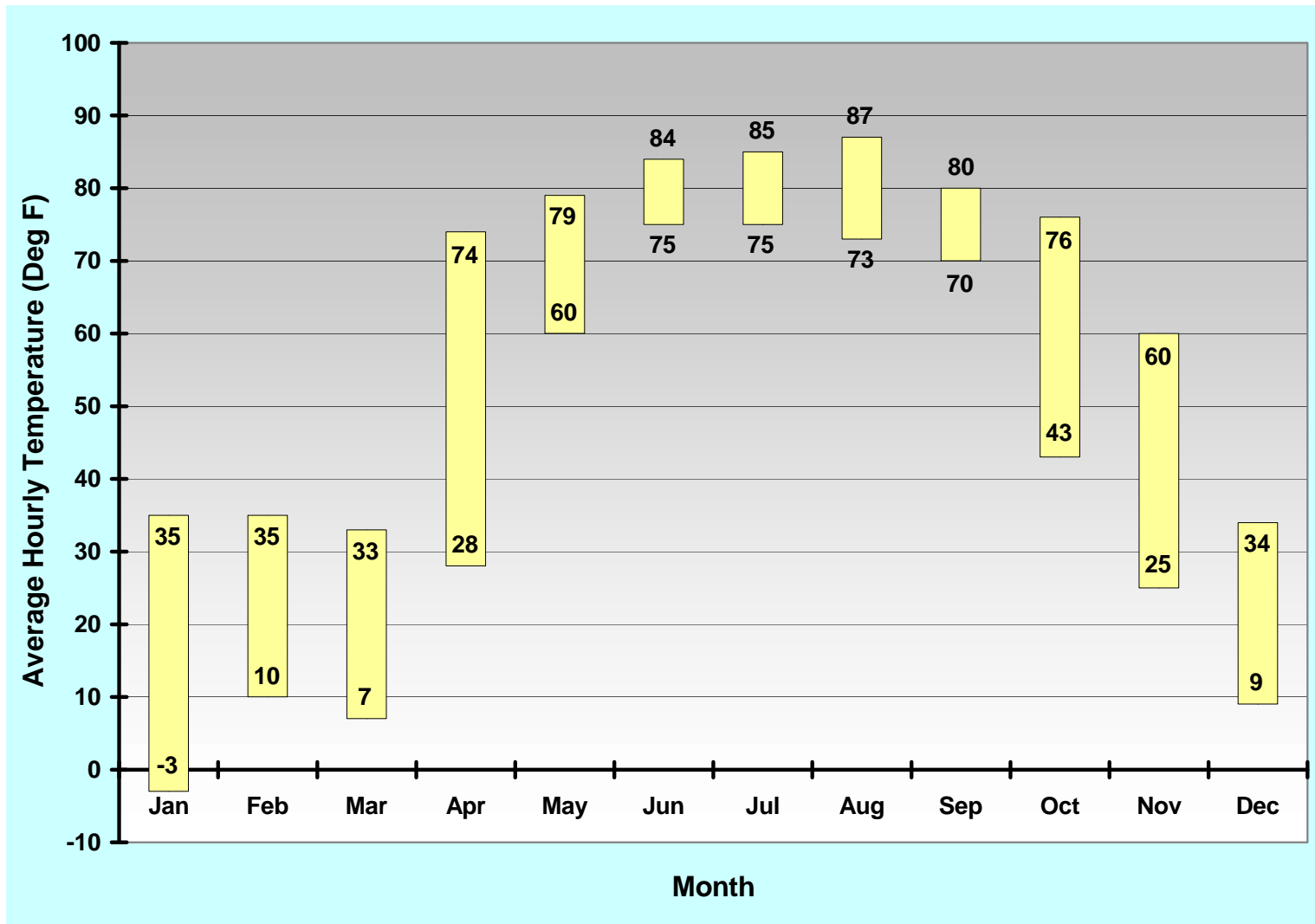


- ◆ **Variables, e.g., economics, don't vary much from year to year**
- ◆ **Weather can vary greatly**

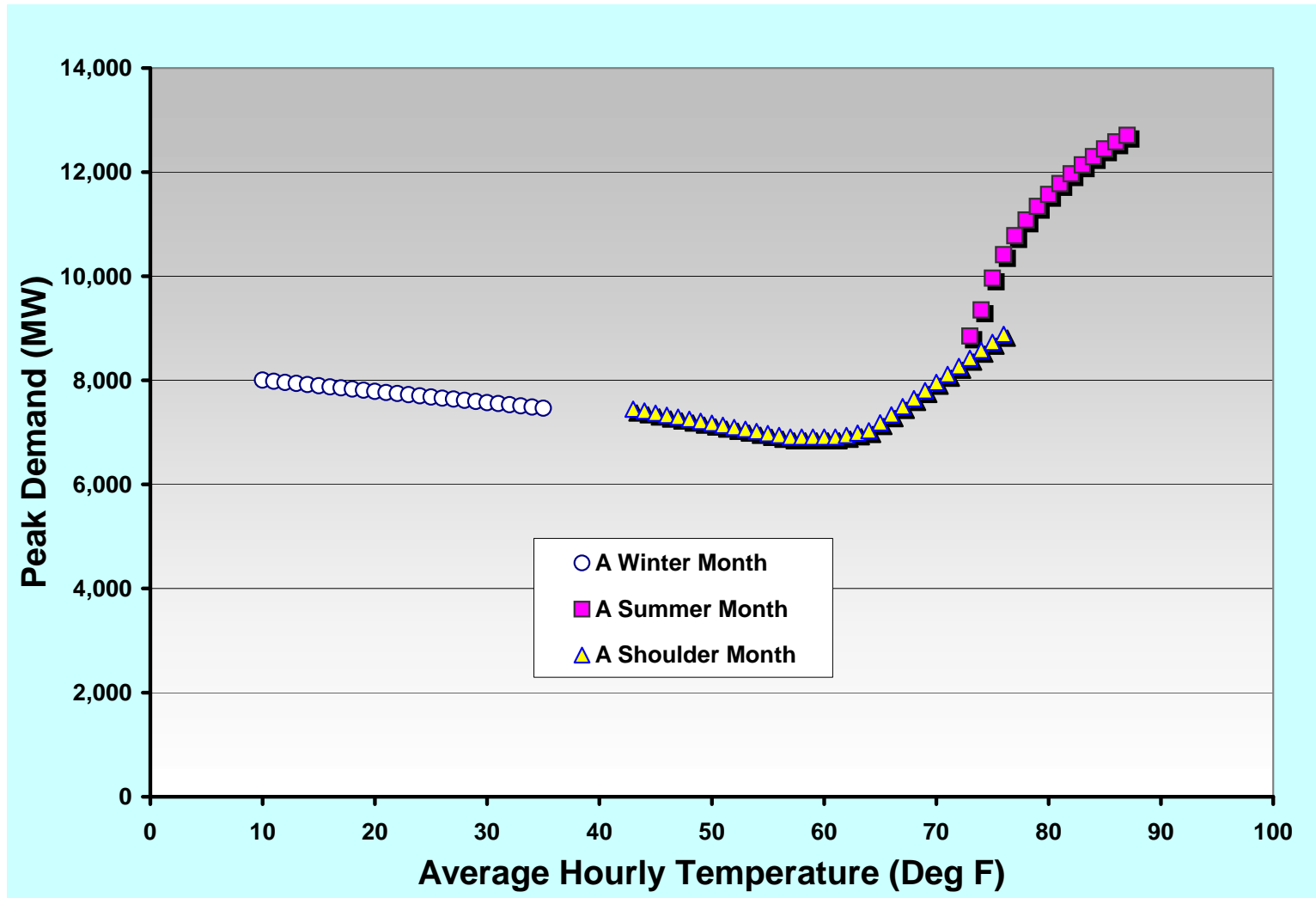
Detroit Metro Airport 1969-2006 Cooling Degree Days (CDD) 65°F Base



Range Of Average Hourly Temperature On Days Of ITC Monthly Peaks, 1995-2006



Some Typical Temperature Effects On Peak Demand



July Model example contains all of the elements



Peak MW is a function of:

Intercept +

ITC area Real Personal Income +

Log of Cooling Degree Days, 65oF Base +

Log of Cooling Degree Days, 65oF Base of previous day +

Day Of Month

■ *Real personal income is for the 11 county ITC service area*

■ *Day of month is actual day of month*

- ❖ Peak demand in July depends on WHEN it occurs within the month, all other things being equal

2008 ITC Billing Demand Forecast



ITC 2008 Forecast			
	Max MW	Wyandotte	Billing MW
Jan	8,145	0	8,145
Feb	7,947	0	7,947
Mar	7,771	0	7,771
Apr	7,150	-21	7,129
May	8,181	-6	8,175
Jun	11,927	0	11,927
Jul	12,159	-15	12,144
Aug	12,757	-17	12,740
Sep	11,078	0	11,078
Oct	7,544	-5	7,539
Nov	8,216	-15	8,201
Dec	8,605	-4	8,601
Annual	111,480	-83	111,397

The adjustment for Wyandotte is minimal

Total billing demand is slightly less than 111.5 GW

Comparison To The Detroit Edison Maximum Demand Forecast Is Reasonable



	ITC 2008 Forecast Max Mw	Detroit Edison Forecast U-15244
Jan	8,145	8,181
Feb	7,954	8,002
Mar	7,771	7,755
Apr	7,150	7,213
May	8,181	9,170
Jun	11,927	11,592
Jul	12,159	12,601
Aug	12,757	11,883
Sep	11,078	11,262
Oct	7,544	7,737
Nov	8,216	7,957
Dec	8,605	8,565
Annual	111,487	111,918
% difference		0.4%
Max MW	12,757	12,601
% difference		-1.2%

Total demand for Detroit Edison is slightly higher than ITC forecast

Detroit Edison's peak estimate is lower

The METC model differs from the ITC model



- ◆ An annual model, i.e. all months are in one model
- ◆ Different economic drivers are used
- ◆ Weather drivers start with a weighted weather calculation of hourly temperature
- ◆ Additional calendar variables

The METC model is complex, more so than the ITC monthly models



Variable	Definition
GDP_NonMfg	Gross Domestic Product - Non Manufacturing
HsStartsLag6	Housing Starts - Single Family, lagged 6 months
HsMultiLag6	Housing Starts - Multi, lagged 6 months
CDD70	Cooling degree days base 70 - avg hourly
CDD70_1	Cooling degree days base 70 lagged one day - avg hourly
HDD65	Heating degree days base 65 - avg hourly
June2006	June 2006 peakday was on a weekend (June 17)
Jan	January binary
Apr	April binary
Jun	June binary
Jul	July binary
Aug	August binary
Sep	September binary
Nov	November binary
Dec	December binary

Housing starts lagged 6 months captures change in residential customers

Monthly binary variables are corrections to base use

June 2006 binary variable as peak day was a Saturday

Weather variables are not transformed

2008 METC Billing Demand Forecast



METC 2008 Forecast			
	Max MW	Entitlements	Billing MW
Jan	6,800	371	6,429
Feb	6,617	446	6,171
Mar	6,621	468	6,153
Apr	6,022	518	5,504
May	6,780	432	6,348
Jun	8,738	326	8,412
Jul	9,201	159	9,042
Aug	9,257	138	9,119
Sep	7,563	525	7,038
Oct	6,533	563	5,970
Nov	7,089	400	6,689
Dec	7,359	276	7,083
Annual	88,580	4,622	83,958

Entitlements are expected to be over 4,600 MW

Billing demand is expected to total 83,958 MW

Comparison To Consumers Energy Forecast Is Reasonable



**Total demand is lower
than the Consumers
Energy estimate**

	METC 2008 Forecast Max MW	Consumers Energy Forecast U-15245 (Adjusted)
Jan	6,800	6,827
Feb	6,617	6,557
Mar	6,621	6,391
Apr	6,022	6,188
May	6,780	6,793
Jun	8,738	8,445
Jul	9,201	8,944
Aug	9,257	9,852
Sep	7,563	7,308
Oct	6,533	6,515
Nov	7,089	6,798
Dec	7,359	7,099
Annual	88,580	87,717
% difference		-1.0%
Max MW	9,257	9,852
% difference		6.4%

Questions

ITC Transmission & METC 2008 Capital Project Review

Ruth Kloecker

ITC Transmission 2008 Capital Project Review

Ruth Kloecker

System Capacity Improvements ITC Transmission



Bismarck – Troy Project

◆ Scope

- New 345 kV Line from Bismarck to Troy, composed of 2.3 miles of overhead line and 11.3 miles of UG cable, and a new 345/138 kV transformer.

◆ Justification Includes

- Reduces overloads on the circuits out of Pontiac and the Pontiac transformers for the Pontiac-Joslyn and Pontiac-Walton circuits.
- Eliminates overloads on the Northeast-Pluto circuit for the loss of the Red Run 230/120 kV transformer
- Reduces loading on the Lincoln-Northeast-Northwest and the Lincoln-Northeast circuits
- Reduces loadings due to DCT outages in the Troy area

◆ Status

- Project is in the MPSC CPCN Process

System Capacity Improvements

ITC Transmission (cont)



Oakland Township Station and Lines

- ◆ Scope
 - New 345/120 kV switching station in SW Oakland Township, three 120 kV lines (two toward Pontiac and one toward Spokane), new 120 kV line from switching station, over dutied breaker replacements.
- ◆ Justification Includes
 - Eliminates overloads on the Pontiac transformers for the loss of the other.
 - Eliminates overloads on the Bloomfield-Hamlin 120 kV circuit for the loss of the Jewel-Spokane 230 kV line
- ◆ Status
 - Attempting to identify a site for the switching station.

Yost Breaker Addition

- ◆ Scope
 - Add a 120 kV line breaker to the Yost end of the Polaris-Yost 120 kV circuit.
- ◆ Justification Includes
 - The 120/13.8 kV and 120/40 kV transformers on bus 101 do not have primary breakers. Distribution faults outage both bus 101 at Yost and bus 101 at Polaris, which serves GM.
- ◆ Status
 - In design.

System Capacity Improvements

ITC Transmission (cont)



B3N ITC-Hydro One Replacement

- ◆ Scope
 - Replace the failed B3N phase shifting transformer at Bunce Creek with two phase shifting transformers to be operated in series.
- ◆ Justification Includes
 - Replace failed equipment
- ◆ Status
 - Awaiting delivery of major equipment for construction to begin.

Overloaded Station Equipment

- ◆ Scope
 - Replace overloaded station equipment for normal and contingency conditions.
- ◆ Justification Includes
 - Eliminates overloads.
- ◆ Status
 - In design.

System Capacity Improvements

ITC *Transmission* (cont)



Durant-GM Milford Proving Grounds

- ◆ Scope
 - Provide two 120 kV feeds to the new Durant Substation, extend Prizm tap to Durant, construct 21 miles of new 120 kV line from Genoa to Durant, construct a new three breaker 120 kV switching station at Durant, and install new line breakers at Genoa and Placid.
- ◆ Justification Includes
 - The present 40 kV standby feed is not capable of supplying the new load forecast for the site.
 - The 40 kV supply is not capable of supplying the necessary voltage at the low voltage bus.
- ◆ Status
 - Under construction.

Infrastructure Improvements

ITC Transmission



Midtown GIS Replacement

- ◆ Replace existing 120 kV GIS equipment do to its reaching the end of its life

120 kV Gas Cable Termination Replacement

- ◆ Replace legacy 120 kV High Pressure Gas Filled terminations

New 120 kV Synchronization Sites

- ◆ Add synchronizing equipment to 120 kV sites for future restoration for black start capabilities.

Breaker Replacement Program

- ◆ Replace aging or over dutied breakers

Power Plant Control Relocation

- ◆ Replace substation control equipment currently located in DTE power plants

Relay Betterment

- ◆ Replace existing relay protection equipment that has reached the end of its life.

Wood Pole Replacement Program

- ◆ Replace aging wood poles

Customer Connections

ITC Transmission



Distribution Interconnection Requests

- ◆ Axle Substation (Chrysler Marysville)
 - Install a new 120 kV substation with two line breakers and a bus tie breaker in the Cypress-St Clair 120 kV line
- ◆ Horn Substation (Chrysler Trenton Engine)
 - Install a new 120 kV substation with a bus tie breaker in the Trenton Channel PP-Jefferson 120 kV line
- ◆ Square Lake Substation
 - Install a new 120 kV substation with a bus tie breaker in the Lily-Bloomfield 120kV line

Generation Interconnection – Network Upgrades

- ◆ G526 – Harvest Wind
 - Install a 120 kV breaker on the Arrowhead end of the Arrowhead-Tuscola 120 kV circuit, string 34 miles of OPGW on the Arrowhead-Bad Axe 120 kV line, and replace relays at Bad Axe, Arrowhead, and Tuscola for the connection of the wind farm.
- ◆ G503 and TAGS
 - Install a new 120 kV substation in the Wyatt-Sandusky 120 kV circuit and construct a second Bad Axe-Wyatt 120 kV line to facilitate the wind farms connection.

METC 2008 Capital Project Review

Ruth Kloecker

System Capacity Improvements METC



Tallmadge Station

◆ Scope

- Install a third 300/400/500 MVA 345/138kV transformer, six 345 kV breakers, and two 138 kV breakers. Retire the two existing 138 kV reactors at this station.

◆ Justification Includes

- Eliminates overloads on the existing transformers for the loss of the Campbell 2 generator and the other transformer.
- Reduces loading on the Campbell Transformer #5 for the loss of the Campbell-Tallmadge 345 kV Line with the Campbell 2 Generator
- Reduces loading on the Campbell Transformer #5 for the loss of the Roosevelt-Gaines 345 kV Line with the Campbell 2 Generator

◆ Status

- Project is in design

System Capacity Improvements METC (cont)



Keystone-Clearwater

- ◆ Scope
 - Rebuild the Keystone-Stover Circuit between Keystone and Clearwater junction with 230 kV FDC structures and 954 ACSR conductor.
- ◆ Justification Includes
 - Eliminates overloads due to the Keystone-Livingston 345 kV line with a generator off, including the Karn 3 or 4 or MCV units.
- ◆ Status
 - In design.

Batavia-Simpson

- ◆ Scope
 - Create a new Morrow-Simpson-Batavia 138 kV line. Install approximately 30 miles of new 138 kV line from Batavia to Simpson and a new breaker and line exit at Batavia.
- ◆ Justification Includes
 - Eliminates overload of the Verona-Barnum Creek 138 kV line for a Project One Generator off
 - Reduces loading of the Battle Creek-Verona 1 and 2 circuits, and the Battle Creek to Morrow 138 kV line for area contingencies.
- ◆ Status
 - Working on final route selection and right of way acquisition.

System Capacity Improvements METC (cont)



Capacitor Program

- ◆ Scope
 - Install 138 kV capacitors at both Bard Road and Croton Substations.
- ◆ Justification Includes
 - Reduces probability of low voltages for various area contingencies nearby each location
- ◆ Status
 - In design.

Terminal Equipment Upgrade Program

- ◆ Scope
 - Replace station equipment for normal and contingency conditions. Locations currently identified - Wealthy and Weadock.
- ◆ Justification Includes
 - Eliminates overloads.
- ◆ Status
 - In design.

Infrastructure Improvements

METC



Goss Station GIS to AIS

- ◆ Replace existing 345 kV GIS equipment with open air equipment

Ludington Reactor

- ◆ Replace 345 kV reactor as it leaks and has reached the end of its life.

Breaker Replacement Program

- ◆ Replace aging or over dutied breakers.

138 kV Sag Clearance

- ◆ LIDAR survey 138 kV lines. Identify and correct NESC code violations identified through the surveys.

METC Communication and Relaying Upgrades

- ◆ Re-direct RTUs, alarm signals, and station data communications

Relay Betterment

- ◆ Replace existing relay protection equipment that has reached the end of its life.

Wood Pole Replacement Program

- ◆ Replace aging wood poles

Infrastructure Improvements METC (cont)



Transformer Monitoring Program

- ◆ Install monitoring equipment on all transformers.

Power Plant Control Relocation

- ◆ Replace substation control equipment currently located in DTE power plants.

Relay NERC 8A Compliance

- ◆ Replace 345 kV line relaying as necessary to comply with NERC recommendation 8A.

Customer Connections METC



Distribution Interconnection Requests

- ◆ Riggsville Substation
 - Modify the 138 kV bus protection scheme.
- ◆ Van Buren Substation
 - Install tap pole and three way switch.
- ◆ Geddes Substation
 - Install tap pole and two way switch.
- ◆ Gray Road Substation
 - Install new three breaker 138 kV switching station in Keystone-Elmwood 138 kV line.
- ◆ Orr Road/Richland
 - Install a new 138 kV switching station, a new 345/138 kV substation and a new 138 kV line to serve the proposed load addition at HSC.

Questions

Regulatory & Legislative Update

Tom Wrenbeck

Regulatory Update : FERC



- ◆ **Filed comments to FERC's Notice of Proposed Rulemaking on Wholesale Competition (FERC Docket No. RM07-19). Our comments focused on:**
 - FERC's proposal of having hybrid boards for RTOs and ISOs. ITC and METC felt that this type of structure would jeopardize the fundamental principle of independence.
- ◆ **The Midwest Stand-Alone Transmission Owners (MSATs which includes ITC, METC, and ATC) filed an answer to all the interventions and protests to the long term pricing proposal. The answer addressed other parties concerns relating to regional cost sharing, quantifiable benefits for extra high voltage facilities, and cost recovery (FERC Docket No. ER07-1261).**
- ◆ **Filed in support of AEP's section 206 complaint against MISO and PJM's existing rate design (FERC Docket No. EL07-101).**
 - AEP wants more regional cost allocation (100% postage stamp) for new and existing transmission facilities over 345kV between the two RTOs.
- ◆ **FERC accepted a compliance filing removing redirect tariff revisions proposed by MISO. The order requires refund of "higher of" hourly redirect charges assessed on a subject-to-refund basis from January 30, 2005 (FERC Docket No. ER05-273).**

Regulatory Update : FERC



- ◆ Intervened and protested MISO's Ancillary Service Market Filing, mainly stating concerns with the Balancing Authority Agreement (FERC Docket No. ER07-1372).
- ◆ Certain MISO TOs filed for an optional Schedule 2A under which reactive power compensation would only be provided outside of 0.95 lead/lag deadband (FERC Docket No. ER08-15).
 - The ITC and METC as part of the MSATs filed a plain vanilla intervention.
- ◆ ITC's Planning, Legal, and Regulatory departments are working with MISO and their stakeholders in developing planning protocols to be used in compliance with Order 890 (FERC Docket No. RM05-25).

Regulatory Update : MPSC



- ◆ A Proposal for Decision (PFD) was issued in the Bismarck Troy Proceeding from the administrative law judge on December 6th (MPSC Case No. U-14933).
 - PFD: The Administrative Law Judge found ITC's application unreasonable because more than 1 alternative should be considered.
 - However, the PFD did find that the application requirements were met and that the project had no threat to the public or safety.
 - Next steps: Exceptions to PFD due 12/28/07; Replies to Exceptions due 1/18/08; MPSC order expected 2/27/08.

- ◆ Rehearing requests have been filed at the MPSC in the Genoa-Prizm case by some homeowners on the south side of M-59. Requests focus on issues with notice, opportunity to participate in the case, eminent domain rights, health issues, and use of M-59 with MDOT expansion plans (MPSC Case No. U-14861).
 - **MPSC has not yet acted on the rehearing requests**
 - **ITC filed a response on 12/4/07**

State Legislative Update



- ◆ Agreement reached on the State Budget. Funding for the 2007-2008 budget will come from an increase in the income tax to 4.35% effective October 1, 2007, a new Michigan Business Tax (MBT), government reforms, a tax on services, and cuts.
- ◆ Legislature repeals the 6% tax on services shortly after it went into effect and enacts an “amnesty bill” for taxes not collected during the period. Services tax would have applied to vegetation management, janitorial, security services, and others.
- ◆ House and Senate energy work group meetings have restarted. Discussions taking place with interested parties while legislation is prepared and circulated. Legislation will address renewables and RPS, energy efficiency, new generation, and possible repeal of the electric service “customer choice” provisions.
- ◆ Legislation has been introduced to address continued problem of theft of metal and copper. Legislation introduced requiring transmission lines of 5 miles or more in townships with populations of 10,000-15,000 to go underground.

Questions

Web Site Information



- ***Please sign up for the ITCTransmission/METC Partners in Business Email distribution list***
 - 1. Go to www.itctransco.com***
 - 2. Select the “Partners in Business” tab on top row***
 - 3. Select the “Sign up” option in the drop down window then fill out and submit the form***
 - 4. You can also acquire copies of the Partners in Business presentations under this tab at any time***

Contact information



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