STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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In the matter, on the Commission's own motion, to commence an investigation into the interconnection of independent power producers with a utility's system.	))))	Case No. U-15113

MICHIGAN ELECTRIC UTILITIES
RESPONSES TO STAFF QUESTIONS

The Michigan regulated electric utilities identified below submit this combined response to the Commission Staff's Questions for Utilities, through the Michigan Electric and Gas Association ("MEGA"). The electric utility members of MEGA participating in this joint filing are: Alpena Power Company; Edison Sault Electric Company, Northern States Power Company, a Wisconsin corporation, d/b/a Xcel Energy; Upper Peninsula Power Company; Wisconsin Electric Power Company d/b/a We Energies and Wisconsin Public Service Corporation. MEGA electric member Indiana Michigan Power Company is filing separately. The Michigan Electric Cooperative Association is participating in this joint filing on behalf of its following electric distribution cooperative members: Alger Delta Cooperative Electric Association, Cherryland Electric Cooperative, Cloverland Electric Cooperative, Great Lakes Energy Cooperative, Homeworks Tri-County Electric Cooperative, Midwest Energy Cooperative, The Ontonagon County Rural Electrification Association, Presque Isle Electric & Gas Co-op and Thumb Electric Cooperative. The Detroit Edison Company and Consumers Energy Company are

participating in this joint filing although Detroit Edison will file a supplemental response as well. Differences among the utilities in their answers to the specific questions are noted in the responses below.

The utilities participating in this filing continue to support all of the provisions of the agreement regarding net metering approved by the Commission in MPSC Case No. U-14346 and implemented through utility tariff filings, including those provisions that allow flexible approaches to cost recovery and compensation for customer generated electricity delivered to the distribution grid.

A. Reply to Questions for Utilities

1. Please explain the metering configuration your utility uses for typical net metering customers. If your utility has no net metering customers yet, please explain how the utility plans to handle net metering. This explanation should include the following:

- **The number of meter(s) used**,

The number of meters used varies among utilities from one to three for typical small customer generators. All responses in this filing include the anticipated installation and other measures are hypothetical for utilities that have no net metering customers, including many of the Cooperatives and MEGA members, as indicated in the reports filed in this case on November 28, 2006.

Detroit Edison: Typically three energy meters are used, one metering inflow, one metering outflow and the third metering customer generation. In some instances more than one meter may be required to measure one or more of these quantities (for example residences with interruptible air conditioning service have two inflow meters). Detroit Edison purchases energy meters in large quantities, reducing the unit cost, and therefore believes that its approach in using three of these meters minimizes the meter cost to the customer while allowing all of the measurements needed for its billing calculations.

Consumers Energy: Two meters are typically used - a single bi-directional meter measuring the flow in and out of the customer premises plus a meter for the generator.

MEGA Electric Companies: The number of meters varies depending on the utility and the installation. The simplest net metering process, for We Energies - single phase and Edison Sault, would use a single energy meter. Another method used by Xcel and Alpena Power (also WPS and UPPCo for 3 phase installations) is to install a single meter that measures flow in each direction, separately. A third method, used by We Energies (3 phase), WPS and UPPCo is to use two separate meters to measure the flow separately in and out of the customer premises.

Cooperatives: The typical installation would use a single bi-directional meter to measure the flow in and out of the customer premises separately.

All utilities could elect to use additional metering if they needed it to calculate T&D cost recovery as allowed by the net metering consensus (U-14346).

• The type of meter(s) used (explain the functions of the meter such as measuring and recording energy flows in both directions, energy only meter that can spin backwards and records only one number, automated meter reading, etc…)

Detroit Edison: For residential applications a single phase, self-contained, 3 wire digital meter that is detented to prevent subtractive registration, measuring consumption in one direction.

Consumers Energy: If the customer is billed on an energy only rate, the Company requires an electronic bi-directional meter capable of measuring energy at the point of interconnection, as well as a kWh/detented energy measuring meter on the customer's generator. For Customers billed on demand-based rates, Consumers Energy requires an electronic bi-directional interval meter that is capable of measuring both energy and demand at the point of interconnection as well as an interval meter on the customer's generator.

MEGA Electric Utilities: Mechanical or digital energy meters measure flow both ways and allow a single net energy reading. Some digital meters (1 and 3 phase) only record in one direction and 2 meters are needed.

Cooperatives: Digital energy meters measure flow separately both ways and allow billing factors to be applied to each measurement. Those cooperatives that have implemented AMR technology have or plan to install meters that are AMR compatible on any net metering installation.

• The cost of each meter to the net metering customer,

Detroit Edison: The cost of each meter to a residential net metering customer would be $0 for all meters required before net metering and $30 for each

additional meter. Typically two additional meters are required, the outflow and generation meters, for a total one-time net metering customer charge of $60.

Consumers Energy: A typical single phase, 200 Amp, self-contained meter installation for a net metering customer would have a total one time cost of $477.00. Elements of the cost include bi-directional kWh meter ($293.00), generation kWh meter ($57.00), new meter socket installed by customer ($34.00), installation and inspection ($150.00) and a credit for the existing meter ($57.00).

MEGA Electric Utilities: Typically, there is no additional cost for customers with a single meter, except where the meter is replaced with a new digital two way meter for net metering. WPS and UPPCo are expected to charge the customer the cost of the second meter. Costs for a bi-directional solid state meter measuring flow in each direction (Xcel, Alpena) are in the range of $200-400.

Cooperatives: The cost for the cooperative single 2-way AMR meters varies from $150 for single phase and up to $640 for three-phase service. The customer would be credited for the cost of a basic kWh meter (approximately $50).

- **Are there other utility charges for net metering customers in addition to the meters and the $100 interconnection fee?**

To date, nearly all small interconnected projects have incurred no additional costs beyond the fee and meter charges. A utility may charge the actual and reasonable costs of modifications to the local distribution system required for a project. For example, modifications might be required to ensure an island condition will not exist between the customer installed generation and the upstream protective device on the distribution system.

- **How the meters are being read,**

Most are read manually (visually) although some companies are in the process of installing AMR (Alger Delta, Cherryland Electric Cooperative, Great Lakes Energy, Midwest Energy, Ontonagon, We Energies).

- **How often each meter is being read,**

Meter reading for all utilities is either monthly or in accordance with the normal or planned meter reading schedule at no additional charge.

• **The purpose of each meter for billing purposes**,

With single one way kWh meters, the net energy flow in and out of the customer premises is measured. With a single bi-directional meter or separate energy meters, the entire energy flow in each direction is measured. A generator meter measures the entire amount of energy produced by the customer generator.

• **List all of the billing determinants the utility requires in order to render bills for net metering customers,**

The determinants measured by the meters include one or more of the following, depending on the type of installation: net amount of energy flowing between the grid and the customer premises; total energy from the grid consumed by the customer; total energy from the customer generator delivered to the grid and total energy output of the customer generator. Other determinants also vary among utilities, with the simplest configuration applying the retail rate for energy service to the net energy for the billing period. Alternatively, in some cases there is a separate wholesale or avoided cost rate applied to the entire amount of customer generation delivered to the grid (Cooperatives). See attachments for more detailed examples of applied billing determinants.

• **Indicate how each billing determinant is used in calculating the customer bill, and indicate which data element is used, from which meter, to obtain that billing determinant,**

In general, for single meter one way installations, the determinants are the net kWh measured and the normal variable retail rate applied to customer usage. Typically the electric cooperatives with bi-directional meters measure the entire flow in each direction and apply the normal retail variable rate to the measured customer usage (entire amount of energy delivered to the customer) and a separate wholesale avoided cost rate (adjusted for line loss) for the measured energy delivered by the customer to the utility, which is credited. For the utilities that measure generator output plus flow in each direction (Detroit Edison and Consumers Energy), the energy determinants are used to calculate the bill with other determinants as shown in the attachments.

• **Provide a sample monthly bill calculation.**

See attachments which include billing determinants and calculated bill examples for various utilities.

2. What concerns would your utility have with using a single bi-directional meter that is capable of measuring and recording both inflow and outflow kWhs for net metering customers? How much would the typical net metering customer need to pay for this meter? Is this type of meter the standard type currently used for new residential customers? If not, what makes it different from the standard model now used?

In Case No. U-14346, the Commission approved a net metering consensus agreement which allowed for compensation to customers for energy delivered to the grid, while at the same time preserving the ability of utilities to recover all costs associated with the net metering program, including program operating costs, transmission and distribution costs attributable to the customer and the above-market cost of any generation credits. Limiting a utility to use of a single bi-directional meter would reduce the ability of utilities to make the appropriate measurements to recover these costs. Detroit Edison and Consumers Energy are already metering customer generation with a separate meter, for the purpose of allowing determination of the entire site load essential for system capacity planning. Matters impacted by limiting the metering options would include all or some of the following: distribution capacity planning, power supply planning, long term load forecasting, distribution revenue requirements, power supply revenue requirements, calculation of surcharge credits and identification of renewable energy credits. As noted, a few utilities are using the single bi-directional meter for net metering customers, sometimes in conjunction with a generation meter.

Costs of the single bi-directional meter are identified above in the approximate range of $150-640. A residential customer would pay the difference in cost between the bi-directional meter and the standard residential energy meter. Such meters are not the standard residential meter – the difference is the capability of measuring the entire energy flow in each direction and other differences including the need for special programming, special orders and manual reading (non-AMR). AMR capability increases the cost.

As noted, a few utilities are using a single meter and in some cases elect not to recover the full transmission and distribution system costs from the very few net metering customers. A range of options is allowed under the agreement approved in Case No. U-14346. Various policy issues regarding subsidization of customer generation were considered in that docket, based on input from regulators, utilities and other interested parties, to be reviewed and evaluated under procedures established in that case giving the program time to develop more experience. The present docket was initiated to consider the technical and procedural matters of interconnection. As indicated above, the employment of additional meters by some utilities to allow proper billing determinations is not adding significantly to the costs borne by customers who elect to install their own generation. For Detroit Edison customers the incremental cost of two additional meters is only

$60.00 and use of the single bi-directional meter would add costs. Two standard meters can be used to measure the same energy flows as the single bi-directional meter at a lower cost.

3. Would utilities consider accepting UL 1741 certified inverters for interconnection? This means that a detailed review of the inverter's engineering design, characteristics, or suitability would not be necessary to approve the use or installation of such UL 1741 certified inverters by a project developer. Will there be circumstances where UL 1741 certified inverters will not be acceptable to the utility? If so, please explain.

Utilities typically do require the inverter to be UL 1741 certified, thus that certification is acceptable for interconnection where inverters are employed (usually solar PV, wind turbines, fuel cells and microturbines). This applies to the smaller projects in the under 30 kW category and inverter interfaced generator interconnection for large facilities (not experienced yet) may need to meet additional requirements. IEEE 1547-2003 provides the technical requirements for interconnection of all generator technologies up to 10 MW. IEEE 1547.1 provides the standard conformance test procedures for interconnecting. All utilities oppose a concept that denies them the right to consider the safety and operational aspects of a specific interconnection based on UL certification alone, because local site and systems considerations may be relevant. An example of this is the need to detect islanding where a local area is isolated from the utility grid and operation of the customer generator would feed power back through a common transformer to other customers in the islanded area. IEEE 1547, Section 4.4.1. Regulatory measures that rely on third party certifications alone as substitutes for case-by-case consideration of project safety are detrimental and not necessary.

Consumers Energy: will accept inverter interfaced generators certified to UL 1741 with a capacity rating of 0 to 750 kW. However, inverter based generators larger than 750 kW will need to meet the additional requirements of the Michigan Electric Generator Interconnection Requirements. Consumers Energy has not experienced inverter interfaced generator interconnection applications for capacities larger than 30 kW. There may be situations in which the UL certification will not be acceptable for interconnection. Some of these situations may include, but are not limited to, the possibility of the UL certification failing to comply with the IEEE 1547 standard or the UL certified equipment is not appropriate for the interconnection, or fails to comply with the Michigan Electric Generator Interconnection Requirements. If that situation presents itself, Consumers Energy will review those interconnection applications on a case by case basis.

4. Rule 7 Subsection (5) of the Interconnection Standards requires the Interconnection Procedures for each utility to include a list of certified contractors that are capable of performing services and construction to make physical modifications to its distribution system. Please provide a copy of your company's certified contractor list and document where the list can be found in your company's Interconnection Procedures.

Detroit Edison, Consumers Energy, Alpena Power and Cloverland lists are attached. This generally is not an issue with the very small number of customers seeking to add generation under the net metering tariffs, so far. The developer usually arranges for the contractor and utilities are not being approached by contractors seeking to be "certified" for the interconnection listing. Also, utilities are aware generally of contractors capable of performing utility work and this information is provided to interested customers either directly or through each company website.

5. Rule 8 requires the Interconnection Standards to include provisions for creating and maintaining an up-to-date listing of pre-certified types, makes, and models of manufactured generating equipment. Please provide a copy of your company's precertified generating equipment list and document where the list can be found in your company's Interconnection Procedures.

Detroit Edison: Detroit Edison uses the Generator Supplement regarding approved relays on its website and also refers to the California Energy Commission Rule 21 equipment list; however, each installation must meet both the UL or other certified testing laboratory compliance and IEEE 1547. See attachments.

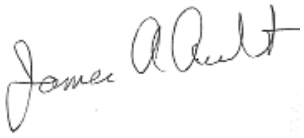
Consumers Energy: The company's approved equipment list is attached and is accessible via the company website www.consumersenergy.com under –For Business—Pricing and Rules—Generation Interconnection Information—Distribution Interconnection Standards, in the document titled "Generator Interconnection Supplement."

MEGA Companies and Cooperatives: Xcel Energy plans to rely on the UL certification list, but has no Michigan projects at this time. With the very small number of projects so far, equipment is considered on a project specific basis since the projects vary with size and technology. The cooperatives and some of the MEGA companies are not in the position to create and maintain a pre-certified generation equipment list and will likely defer to lists created and maintained by the larger utilities or other administrative bodies, such as the California Energy Commission.

B. Comment on the Meeting Summary

The Staff circulated a meeting summary including a discussion of consensus areas. The utilities submitted a filing indicating areas of reform for the rules and procedures. There is no consensus agreement yet on the items listed in Item 4.A. of the Staff summary, however. These were suggestions made via comments at the meeting and the possibility for any consensus to develop would need to be considered by the referenced working group. In general, utilities support reasonable proposals for education and outreach, pre-application meetings, the timeline collaborative, a simplified waiver process, and a project manager for large projects.

Respectfully submitted,



Dated: September 30, 2005

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On behalf of the Participating Utilities

Attachments to Electric Utility Responses in Case No. U-15113

We Energies sample calculation showing determinants and typical bill:

Typical Net Metered Customer Bill

kWh Delivered to Customer:	700
kWh Delivered to Utility:	250
Difference:	**450**

Customer Retail Energy Rate:		**Billed Amount**	
Distribution Charges:			
Facilties Charge:	$ 9.60	$9.60	
Delivery Charge/kWh:	$ 0.0389	$17.51	
Power Supply Charges:			
Non-space heating/kWh:	$ 0.0381	$17.15	
PSCR/kWh:	$0.01958	$8.81	
Sales Tax @ 4%:		$2.12	
		$55.18	**Total Bill**

Detroit Edison billing determinants:

Billing Determinants Base Residential Rate	
Billing Determinant (BD) Name	**How the Determinant is typically determined**
Base Rate	
first 17kWh/day of consumption	
	17 * (end date - start date) not greater than total delivered power
excess consumption over 17 kWh/day	
(Inflow+Generator-Outflow) - 17 * (end date- start date) not less than zero	
Consumption for Power Supply surcharges	
Consumption for Power Supply Cost Recovery Factor (PSCR)	
Consumption for Delivery Charge	
Consumption for Energy Delivery Surcharges	
	the billing determinant calculation for these four charges is the same **(Inflow+Generator-Outflow)**
Rider 16 Net Metering Credits	
first 17kWh/day of consumption Eligible for credit	
	17 * (end date- start date) not greater than total delivered power
excess consumption over 17 kWh/day Eligible for credit	
(Net Electric Generation delivered back to site+Generation-Outflow-17"(end date-start date)	
Total Rider 16 Generation Eligible for Credit	
(Net Electric Generation delivered back to site + Generator - Outflow)	
Consumption Eligible for the Delivery Surcharge Credit	
Generation Utilized in current billing period which equals **(Generator-Outflow)**	
Consumption Eligible for the Generation Surcharge Credit	
(Net Electric Generation delivered back to site + Generator - Outflow)	
Consumption Eligible for the Program Credit	
Generation Utilized in current billing period which equals **(Generator-Outflow)**	

Detroit Edison sample bill calculation:

The billing determinants are calculated from the metered values for inflow, outflow and generation

metered value = (meter reading at the end of the period - meter reading at the beginning of the period) * a meter constant

Rider 16 Net Metering Requires keeping track of energy generated and sent to the utility This is called Net Electric Generation or NEG — NEG = outflow

NEG balance = the summation of NEG less what has been delivered back to the site by the electric utility

NEG delivered back to the site by the electric utility is the lesser of (the site requirement not supplied by the generator) or (the NEG balance)

For the example that follows the beginning NEG balance is 80 — Generation Utilized on site = (Generator-Outflow) is 951 — all meter constants are one.

the site requirement not supplied by the generator is 86 — The previous month's bill of $10.38 was paid in full — meter costs were paid up front

Detail Charges

1234 Any Street AnyTown, MI, 48zzz-zzzz

Detroit Edison Residential Electric Service Current

Power Supply Charges							
Energy Charge	first 17kWh/day	493	KWH	@	0.04531	$	22.34
Energy Charge	excess over 17 kWh/day	544	KWH	@	0.05941	$	32.32
Power Supply surcharges*		1037	KWH	@	0.002274	$	2.36
Power Supply Cost Recovery Factor (PSCR)		1037	KWH	@	0.00545	$	5.65
Delivery Charges							
Delivery Charge		1037	KWH	@	0.04284	$	44.43
Energy Delivery Surcharges**		1037	KWH	@	0.006232	$	6.46
Residential Michigan Sales Tax				@	4%	$	4.54
Total Detroit Edison Current Charges							
Before Rider 16 Net Metering Credits						**$**	**118.10**

Current Billing Information

Service Period	7-Nov-06	–	6-Dec-06		
Days Billed		29			
Inflow Meter Number	9999991				
Meter Reading	394	Act	480	Act	
KWH delivered		**86**			
Generator Meter Number	9999992				
Meter Reading	522	Act	1550	Act	
KWH generated		**1028**			
Outflow Meter Number	9999993				
Meter Reading	273	Act	350	Act	
KWH Net Excess Generation		**77**			
KWH Usage (Inflow+Generator-Outflow)		**1037**			

	Current Month		12 mo. cycle	
Total Electric Generation	1028	KWH	4270	KWH
Net Electric Generation Beginning balance ***	80	KWH		
Net Electric Generation returned to site	80	KWH	682	KWH
Net Electric Generation delivered to DECo	77	KWH	695	KWH
Net Electric Generation Ending balance ***	77	KWH		
Generation Utilized in current billing period (Generator-Outflow)	951	KWH	3575	KWH
Generation Credit (Net Electric Generation returned to site+Generator-Outflow)	1031	KWH		
NEG transferred to DECo ***	0	KWH	NEG set to Zero in month with	1-Aug consumption

Site Usage History – Average per day

	Current Month	Last Month	Last Year
KWH Usage	35.76	37.69	33.81
Change		-5%	6%

Rider 16 Net Metering Credits

Power Supply Energy Charge Credit first 17 kWh/day	493	KWH	@	0.04531	$	22.34
Power Supply Energy Charge Credit excess over 17 l	538	KWH	@	0.05941	$	31.96
Power Supply Cost Recovery Factor Credit	1031	KWH	@	0.002274	$	2.34
Delivery Portion of the Surcharge Credit	951	KWH	@	0.006232	$	5.93
Power Supply Portion of the Surcharge Credit	1031	KWH	@	0.002274	$	2.34
Program Credit	951	KWH	@	0.04284	$	40.74
Residential Michigan Sales Tax adjustment			@	4%	$	4.23
Total Rider 16 Net Metering Credits					**$**	**109.89**

Summary of Charges

Account Balance	November 7, 2006	**$ 10.38**
Payment Received_____Thank		**$ (10.38)**
Balance Prior to Current		**$ -**
Current Charges		
Detroit Edison Residential Electric		**$ 118.10**
Detroit Edison Net Metering Credit		**$ (109.89)**
Total Current Charges		**$ 8.21**
Account Balance	December 6, 2006	**$ 8.21**

* Power supply surcharges include Regulatory Asset Recovery Surcharge (RARS)

** Delivery Surcharges include Nuclear Decommissioning Surcharge (NDS), Securitization Bond Charge (SBC), Securitization Bond Tax Charge (SBTC), Choice Implementation Surcharge (CIS), and a Rate Reduction Credit (RRC)

*** Net Electric Generation beginning balance Set to 0 after billing period with 1-Aug consumption

In the example provided above the customer would have paid $118.10 for electric power without his on site generation and the net metering rider. The net metering rider provides credits totalling $109.89. Consequently the customers net bill is $8.21.

Consumers Energy billing determinants and sample bill:

Net Metering Billing Determinants			
Rate B - Rate Code 010	kWhs		
Energy supplied by CECO (inflow)	366		
Customer suppy to grid (outflow)	50		
Customer generator output	100		
Total Customer Consumption	416		
Net Excess Generation Credits Carried	100		
CURRENT BILL			
Rate 010 - Current Rates			
ELECTRIC POWER SUPPY CHARGES	kWhs	Rate	Amount
KWH CHARGE - ENERGY	416	0.062992	$26.20
POWER SUPPLY COST RECOVERY	416	0.015890	$6.61
ELECTRIC DELIVERY CHARGES			
ELECTRIC CUSTOMER CHARGE			$8.00
ELECTRIC DISTRIBUTION CHARGE	416	0.032925	$13.70
NUCLEAR DECOMMISSIONING	416	0.000185	$0.08
ECC IMPLEMENTATION	416	0.000901	$0.37
SECURITY RECOVERY FACTOR	416	0.000256	$0.11
REGULATORY ASSET RECOVERY	416	0.001600	$0.67
SECURITIZATION CHARGE	416	0.001265	$0.53
SECURITIZATION TAX CHARGE	416	0.000456	$0.19
Total billing before Net Metering Credits			$56.46
NET METERING CREDITS			
Power Supply Credit *	200	0.062992	$12.60
PSCR Credit	200	0.015890	$3.18
Distribution Credit **	50	0.032925	$1.65
NEG Carried Forward	0		
Total billing after Net Metering Credits			$39.03
Sales Tax @ 6%			$2.34
TOTAL ELECTRIC BILLING			$41.37

UPPCO Net Metering

Assumptions		
Customer Onsite Generation	400	kWh
Customer Home Consumption	900	kWh
Customer Generation Delivered to Company	100	kWh
Customer Purchases from Company	600	kWh

Billing - UPPCO Residential Customer- A-1

Distribution Charges	Units	Rate	Charge	
Customer Charge	1	$ 8.00	$ 8.00	
Energy Charge	600	$0.06074	$ 36.44	
				$ 44.44
Power Supply Charges				
Energy Charge	600	$0.07120	$ 42.72	
PSCR	600	$0.00240	$ (1.44)	
				$ 41.28
Net Metering - Credit				
Energy Charge	100	$0.07120	$ 7.12	
PSCR	100	$0.00240	$ (0.24)	
				$ (6.88)
Net Customer Payment				**$ 78.84**

Typical Cooperative Net Metering Billing format

Net Metering Calculation

In Meter Readings			Out Meter Readings	
This month	**1200**		**This month**	**300**
Last Month	1000		Last Month	250
kWh	200		kWh	50
Net customer usage		150		
Net excess generation		0		

Billing			
			$
Facilities Charge			9.00
			$
Energy Charge	150	kWh	10.85
			$
PSCR	150	kWh	2.13
			$
Subtotal			21.98
			$
Sales Tax			0.88
			$
Credit for Generation			1.00
			$
Total Due			21.86

Cooperative Line Loss	8.50%
Cooperative Average Sustem Cost	$ 0.04500
Current Month PSCR Factor	$ 0.01417

Net Excess Generation			
Energy	0	kWh	$ -
			$
Carry-over from last month			1.00
This Month			$ 1.00
Carry-over fror next month			$ -

Alpena Power Company
Sample Net Metering Bill
General Service Customer*

Account Name	Service Address	Accoun
Any General Service Customer	Anywhere	1234

Meter Number	Beginning Date	Ending Date	Days	Beginning Read	Ending Read	Multiplier	K
12 345 678	12/15/06	1/15/07	31	1000	1500	1	
		Delivered to Alpena Power:		250	400	1	

Rate Type:	Net Metered-General Serv	Read Type:	Actual

Energy Delivered to Customer	500	kWh
Energy Delivered to Alpena Power	150	kWh
Net Energy Delivered to Customer	350	kWh

Distribution Charges:						
Customer Charge						
Energy Charge	500	kWh	@	$	0.04304	
Total Distribution Charges						
Power Supply Charges:						
Energy Charge	350	kWh	@	$	0.03931	
Power Supply Cost Recovery	350	kWh	@	$	0.01494	
Total Current Power Supply Charges						
Power Supply Charge Credit Carryforward from Last Month's Bill						
Net Power Supply Charges before Credit Carryforward to Next Month's Bill						
Power Supply Charge Credit Carryforward to Next Month's Bill						(see note below)
Total Net Power Supply Charges						
Michigan Sales Tax						
Total Due for Current Month						

A 2% penalty may be added if paid after due date.

Savings this bill due to net metering:		
	Regular bill without net metering	58.72
	Actual bill	50.10
	Savings	8.62

Note: By rule a negative Net Power Supply Charge must be carried forward to the next month's bill.
Also by rule, the Power Supply Charge Credit Carryforward is reset to zero as of the end of the December billing

* Residential customer bill would work the same way except the Residential Rates would be used.

Detroit Edison
Distribution Operations' Contractors
Underground Line Construction

1. Corby Energy Services Inc
6001 Schooner Dr
Belleville, MI 48112
Ofc: (734) 547-9237
Fax: (734) 547-0340
Contact: Mark Helsel

2. InfraSource Underground Construction
4033 E. Morgan Rd
Ypsilanti, MI 48197
Ofc: (734) 434-2000
Fax: (734) 434-2001
Contact: Randy Harrison

3. Kaltz Excavating Co Inc
2420 Auburn Rd
Auburn Hills, MI 48326
Ofc: (248) 335-1717
Fax: (248) 335-8545
Contact: Darrell Kaltz

4. Underground Lines Inc
6722 19 1/2 Mile Rd
Sterling Heights, MI 48314
Ofc: (586) 731-6101
Fax: (586) 731-1427
Contact: Vince Floyd

5. Union Excavating Co.
67220 Van Dyke Rd
Washington Twp, MI 48095
Ofc: (586) 336-3320
Fax: (586) 336-3324
Contact: Pete Connolly

The contractors listed above are currently or have recently performed underground line construction services for Detroit Edison

Jan-07

January 18, 2007

Detroit Edison
Distribution Operations' Contractors
Overhead Line Construction

1. Asplundh Construction Corp
708 Blair Mill Rd
Willow Grove, PA 19090
Ofc: (215) 784-1390
Fax: (215) 784-4225
Contact: Brent Asplundh

2. Harlan Electric Co
2695 Crooks Rd
Rochester Hills, MI 48309
Ofc: (248) 853-4601
Fax: (248) 853-4603
Contact: Bob Kohl

3. Hydaker Wheatlake Co.
420 Roth St
Reed City, MI 49677
Ofc: (231) 832-2258
Fax: (231) 832-4385
Contact: Frank Wheatlake

4. Kent Power, Inc
90 Spring St
Kent City, MI 49330
Ofc: (616) 678-5775
Fax: (616) 678-4100
Contact: Richard Kent

5. N G Gilbert Corp
101 S. Main St
Parker City, IN 47368
Ofc: (765) 468-3007
Fax: (765) 468-3130
Contact: Gary Townsend

6. Quality Lines Inc
22283 Township Rd 177
Forest, OH 45843
Ofc: (419) 365-9445
Fax: (419) 365-9344
Contact: Ron Smith

7. S P E Utility Contractors LLC
4400 Dove Rd
Port Huron, MI 48060
Ofc: (810) 491-8411
Fax: (810) 491-7698
Contact: David Postill

8. The Energy Group Inc
Energy Clearance
Energy Construction
P O Box 3693
Grosse Pointe Farms, MI 48236
Contact: Contact: Dan Francis
Ofc: (313) 491-8411
Fax: (313) 491-7698

The contractors listed above are currently or have recently performed overhead line construction services for Detroit Edison

January 18, 2007

Consumers Energy's List of Certified Contractors

Below is a list of the certified contractors who are approved to perform work on Consumers' distribution system (both line and substation construction) in accordance with Consumers' safety and design criteria:

1. The Hydaker-Wheatlake Company

2. Newkirk Electric

3. Kent Power

(On occasion Consumers requested bids for line projects from MJ Electric and CC Power.)

Note: This list may be updated from time to time to reflect either additions and/or subtractions.

Alpena Power Company List of Approved Contractors:

Newkirk Electric Associates, Inc.
1875 Roberts St
Muskegon, MI 49442

The Hydaker-Wheatlake Co
420 Roth St
PO Box 147
Reed City, MI 49677

Kent Power, Inc
90 Spring St
Kent City, MI 49330

DTE APPROVED RELAYS

Approved Relays (For use as protection of the Detroit Edison System at independently owned generation facilities)

UTILITY GRADE

1. Under & Over/Underfrequency (81U & 81O/U)

   Basler BEl-81
   BEI-81 O/U

2. Undervoltaqe (27)

   General Electric IAV54
   ABB CV-2
   CVD*

3. Overvoltage (59)

   General Electric IAV51
   PJV
   ABB CV-4
   SV-1

4. Zero Sequence Overvoltage (N-59)

   General Electric PJV
   ABB SV-1

5. Primary Neutral Overcurrent (N-A51)

   General Electric IAC53
   ABB CO-8

6. Voltage Restraint Time Overcurrent (51V).

   General Electric IJCV

7. Reverse Power (32)

   Basler BEI-32R* (30 or 10)
   BEl-32 ON
   ABB H3*

8. Timing (62)

General Electric SAM
ABB TD-5

9. Transfer Trip

RFL Industries Type 6710 Audio Tone Transfer Trip Receiver

INDUSTRIAL GRADE

Items

10. Reverse Power (32)

Basler BE4-32 (10)*

11. Timing (62)

Agastat 7000 Series

* Requires separate time delay relay

Note: The exact model or style of the above listed relays will be dependent upon the
particular site-specific application, or Detroit Edison specification.