

# EnergyUnited

YOUR LOCAL CONNECTION

A Truist Energy Cooperative



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November 25, 2009

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NOV 30 2009  
Clerk's Office  
N.C. Utilities Commission

Renee Vance, Chief Clerk  
North Carolina Utilities Commission  
430 N. Salisbury Street  
Dobbs Building  
Raleigh, North Carolina 27603-5918

E100 SUB 124

Re: EnergyUnited – 2009 Updated Integrated Resource Plan and Annual Report

Dear Ms. Vance:

Please find enclosed for filing an original and thirty (30) copies of EnergyUnited's 2009 Updated Integrated Resource Plan and Annual Report. Also included is a certification document that you have requested in the past.

If you have any questions, please do not hesitate to contact me at 704.924.2135

Sincerely,

H. Wayne Wilkins  
Chief Executive Officer

cc: Giselle Rankin, NCUC

## **Integrated Resource Plan Summary**

This document represents EnergyUnited EMC's Integrated Resource Plan and Annual Report filed with the North Carolina Utilities Commission (NCUC), including a forecast of loads and resources to meet their power supply needs over the next fifteen years. In addition, this report incorporates EnergyUnited's efforts towards compliance with its obligations under the Senate Bill 3 Renewable Portfolio Standards.

Under the Wholesale Power Supply Agreement (WPSA) with North Carolina Electric Membership Corporation (NCEMC), NCEMC is obligated to supply Independent Members, such as EnergyUnited with electric power and energy from its existing contract and generation resources. To the extent that the electric power and energy supplied under the WPSA is not sufficient to meet the electric energy requirements of its member/consumers, the Independent Members must independently arrange for purchases of electric power and energy from a third party. In December 2003, the WCE members entered into a Power Purchase Agreement with Morgan Stanley Capital Group, Inc. (Morgan Stanley) that was effective January 1, 2004.

EnergyUnited is constantly reviewing the wholesale power supply market looking for opportunities to purchase incremental power supply above the NCEMC, Southeastern Power Administration (SEPA) and Morgan Stanley purchases to meet its load requirements. As a result of an RFP process in 2005, EnergyUnited has signed long-term agreements with Southern Power Company and Southern Company Services, Inc. that were effective September 1, 2006. Through these agreements and the purchases from NCEMC, SEPA and Morgan Stanley, EnergyUnited's power supply needs will be met through the planning period.

EnergyUnited is a transmission dependent utility and relies on the transmission system of Duke Energy to transfer power purchases to their loads. EnergyUnited receives Network Integration Transmission Service under Part III of the Open Access Transmission Tariff with Duke Transmission.

As a part of EnergyUnited's plan to comply with the requirements of the REPS pursuant to Rule R8-67(b), the following action steps are currently underway:

- (i) EnergyUnited has contracted with Iredell Transmission, LLC for the purchase of the energy from a 3 MW landfill gas generator in Iredell County NC. This project began generating in 4<sup>th</sup> quarter 2008. This facility has the potential to grow to approximately 5 MW over the coming years.
- (ii) EnergyUnited has signed a twenty year Purchased Power Agreement with Sun Edison to construct a 1 MW solar array in Alexander County. This facility is proposed to be operational by March 2010.
- (iii) EnergyUnited has signed a contract to purchase Renewable Energy Credits from Salem Energy Systems LLC for the REC's generated from the Forsyth County Landfill for 2008 through 2010.
- (iv) EnergyUnited has made a one-time purchase of Renewable Energy Credits generated from an out of State Wind Farm that has registered with the NCUC.
- (v) EnergyUnited submitted two Energy Efficiency Programs to the NCUC for approval prior to our September 1, 2009 IRP filing. Since that filing, the NCUC has approved

both programs. One program targets Commercial and Industrial lighting upgrades and the other targets high efficiency heat pumps. In 2007 and 2008 EnergyUnited gave away Compact Fluorescent Lights to its members that attended the Annual Meeting. EnergyUnited continues the process of educating its membership on the value of energy efficiency and conservation. This education plan includes monthly articles in the EnergyUnited newsletter along with interactive tools on the EnergyUnited website.

- (vi) Based on Senate Bill 3, EnergyUnited's SEPA resource may apply depending on clarification of the resource from SEPA of the REPS requirements.

The following is EnergyUnited's response to the requested data as outlined in NCUC's Rule R8-60:

### **Section I: EnergyUnited Integrated Resource Plan**

#### **1. Forecasts of Load, Supply-Side Resources, and Demand-Side Resources:**

- a. Table 1.1 provides a ten-year history and a 15-year forecast of EnergyUnited's customers by each customer class, along with a ten-year history and a 15-year forecast of the energy sales (kWh) by each customer class.
- b. Tables 1.2 and 1.3 provide a 15-year forecast of EnergyUnited's peak load requirements and resources from 2010 through 2024 for both the summer and winter periods. EnergyUnited's portfolio of resources (NCEMC WPSA, SEPA, Morgan Stanley, Southern Power Company and Southern Company Services) meet EnergyUnited's summer and winter load requirements. EnergyUnited continues to utilize its demand side resources, which are limited to residential water heater and air conditioning controls, along with commercial/industrial customer owned stand-by generation. These resources are utilized during peak hours to limit the overall demand on the system, and also provides as an additional reserve capacity resource. EnergyUnited has developed several energy efficiency programs such as High Efficiency lighting targeted at a reduction in consumption.
- c. Table 1.4 provides a chart of EnergyUnited's Load Duration Curve for the summer and winter peaks.
- d. Load forecasting methods and models:

EnergyUnited employs TSE Services, a market research organization founded by North Carolina's electric cooperatives, to develop its annual load forecast. TSE is responsible for the coordination of the forecasting effort including consumer research, energy and demand forecasting, and weather data analysis. The load forecast is reviewed, adjusted and revised, if necessary, by EnergyUnited.

Customers, energy and demand are forecast on a monthly basis. The customer forecast and the energy sales forecast are completed for each retail class listed on the RUS Form

7. These classes include residential, seasonal, commercial, industrial, and other. The system monthly energy is the sum of the retail class energy sales adjusted for losses.

Residential and commercial customers are forecast using regression analysis. This forecast of customers, by retail class is then utilized in developing the energy forecast. For both the residential and commercial energy forecast, the forecast of customer growth of each class is multiplied by the forecast of average energy consumption per customer *for that class, under the assumption of normal weather*. Industrial customers are modeled on an individual basis. The demand forecast is developed similarly to the energy forecast by multiplying the number of customers and an average hourly demand per customer.

Table 1.1:		EnergyUnited Customer Class and Energy Sales 15 year forecast and 10 year history																									
CUSTOMERS BY CLASS		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
RESIDENTIAL		93,384	96,139	97,224	97,255	100,920	102,956	105,104	101,673	102,464	102,464	102,647	102,839	103,454	105,748	108,113	110,552	113,066	115,658	118,331	120,998	123,744	126,573	129,487	132,488	135,579	
SEASONAL		1,835	1,815	1,819	1,850	1,631	1,839	1,855	1,618	1,619	1,616	1,611	1,601	1,581	1,519	1,475	1,431	1,385	1,337	1,280	1,241	1,191	1,139	1,086	1,031		
COMMERCIAL		3,851	4,476	6,186	7,041	7,015	8,044	8,951	15,617	15,959	15,959	16,089	16,297	16,663	17,035	17,415	17,803	18,200	18,606	19,021	19,445	19,879	20,322	20,775	21,236	21,712	
INDUSTRIAL		24	19	21	24	18	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16		
OTHER		125	204	223	233	256	263	287	274	334	339	345	351	357	363	368	375	381	387	393	399	405	411	417	423	429	
TOTAL		99,198	102,653	105,473	106,203	109,842	112,919	116,014	119,199	120,392	120,397	120,713	121,214	122,091	124,723	127,432	130,221	133,064	136,052	139,098	142,148	145,285	148,513	151,834	155,251	158,787	
MWH SOLD BY CLASS		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
RESIDENTIAL		1,259,211	1,304,778	1,344,419	1,381,340	1,435,827	1,485,753	1,453,808	1,532,844	1,503,982	1,398,911	1,408,216	1,411,506	1,417,100	1,436,805	1,468,811	1,501,811	1,535,834	1,570,904	1,607,073	1,643,727	1,680,907	1,719,207	1,758,653	1,799,283	1,841,131	
SEASONAL		7,462	7,584	7,753	7,660	7,320	7,457	7,355	7,709	7,452	7,790	7,775	7,749	7,705	7,509	7,308	7,098	6,884	6,662	6,433	6,206	5,971	5,729	5,479	5,223	4,959	
COMMERCIAL		401,751	393,883	420,229	432,221	458,979	498,635	522,140	559,557	592,319	707,958	723,816	740,029	756,806	773,554	790,882	808,597	826,710	845,228	864,161	883,519	903,310	923,544	944,231	965,382	987,006	
INDUSTRIAL		74,330	108,549	124,718	121,961	124,977	142,559	151,621	156,112	151,486	145,727	145,800	145,873	145,946	146,018	146,018	146,018	146,018	146,018	146,018	146,018	146,018	146,018	146,018	146,018	146,018	
OTHER		1,246	2,453	3,245	3,159	3,527	3,935	4,026	2,557	4,848	5,053	5,138	5,226	5,316	5,406	5,496	5,586	5,676	5,766	5,857	5,947	6,037	6,127	6,217	6,307	6,397	
TOTAL		1,744,000	1,817,245	1,900,364	1,926,341	2,030,730	2,138,339	2,138,748	2,258,579	2,260,067	2,283,439	2,280,743	2,310,383	2,332,873	2,369,282	2,418,513	2,468,111	2,521,122	2,574,578	2,629,542	2,685,417	2,742,243	2,800,625	2,860,598	2,922,213	2,985,511	

2009 ncuc IRP filings  
summer (Table 1.2)

11/25/2009

Table 1.2: EnergyUnited Total Projected Summer Load and Capacity (2009 Load Forecast)

EnergyUnited				LOCATION	FUEL SOURCE	CAPACITY DESIGNATION	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Load Requirements:																						
PEAK BEFORE ANTICIPATED ENERGY EFFICIENCY PROGRAMS (MW) (1)							566.3	578.0	580.2	584.0	594.1	607.5	621.3	635.5	650.2	666.2	682.5	699.0	716.0	733.4	751.3	
Less: Impact of anticipated energy efficiency programs							(0.3)	(1.4)	(4.8)	(7.5)	(10.5)	(10.8)	(12.5)	(12.8)	(12.8)	(12.7)	(12.8)	(12.9)	(13.0)	(13.1)	(13.3)	
PEAK NET OF ANTICIPATED ENERGY EFFICIENCY PROGRAMS							566.0	576.6	575.3	576.5	583.5	596.9	608.8	623.0	637.5	653.5	669.6	686.1	703.0	720.3	738.1	
Purchased Resources: (2)																						
NCEMC Existing Resources																						
Catawba Nuclear Station	Duke Control Area	Nuclear	Base	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	
AEP Purchase	Duke Control Area	Coal	Base	26.0																		
CP&L SOR A	Duke Control Area	Mix	Base	29.0																		
SCE&G Intermediate Resource	Duke Control Area	Gas	Intermediate	32.0	32.0	32.0																
AEP BaseLoad Resource	Duke Control Area	Mix	Base	19.0	19.0	19.0																
Dominion PPA	Duke Control Area	Mix	Intermediate	19.0	19.0	19.0	19.0	19.0														
Total NCEMC Existing Resources							204.0	149.0	149.0	98.0	98.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	
SEPA	Southeast		Base/Peaking	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	
Morgan Stanley Purchases (3)																						
Total Morgan Stanley Purchases	Various	Mix	Base/Intermediate/Peaking	265.0																		
Southern Power/Southern Company Purchases (4)																						
Total Southern Purchases	Various	Mix	Base/Intermediate/Peaking	81.0	411.6	410.3	462.5	469.5	501.9	513.8	528.0	542.5	558.5	574.6	591.1	608.0	625.3	643.1				
TOTAL RESOURCES (MW)							566.0	576.6	575.3	576.5	583.5	596.9	608.8	623.0	637.5	653.5	669.6	686.1	703.0	720.3	738.1	
RESERVE CAPACITY (MW) (4)							85.0	86.7	87.0	87.6	89.1	91.1	93.2	95.3	97.5	99.9	102.4	104.9	107.4	110.0	112.7	
REPS Resources																						
ANNUAL ENERGY BEFORE ENERGY EFFICIENCY PROGRAMS(GWH) (5)							2,506.1	2,527.5	2,551.9	2,591.9	2,645.7	2,701.0	2,757.9	2,816.3	2,876.3	2,937.4	2,999.5	3,063.3	3,128.9	3,196.2	3,265.4	
Less: Impact of anticipated energy efficiency programs							(0.8)	(2.0)	(45.8)	(70.7)	(99.3)	(99.6)	(116.3)	(117.1)	(117.8)	(118.7)	(119.5)	(120.4)	(121.3)	(122.2)	(123.2)	
NET ANNUAL ENERGY							2,505.2	2,525.5	2,506.0	2,521.3	2,546.4	2,601.4	2,641.5	2,699.2	2,758.5	2,818.7	2,880.0	2,942.9	3,007.6	3,074.0	3,142.2	
Capacity from renewable resources(MW):																						
Iredell Transmission, LLC	Iredell County, NC	Methane Gas	Base	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Anticipated Solar Resources	TBD	Solar	N/A	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
SEPA	SouthEast		Intermediate/Peaking	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	
Other Anticipated Renewable Resources (TBD)	TBD	TBD				4.5	4.7	4.9	5.0	13.4	13.7	14.1	31.9	33.0	34.1	35.2	36.3	38.0				
Total Anticipated Renewable Capacity							20.0	20.0	24.5	24.7	24.9	26.0	34.4	34.7	35.1	53.9	55.0	56.1	57.2	58.3	60.0	
Energy from renewable resources (GWH):																						
Iredell Transmission LLC	32			25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	
Anticipated Solar Resources				0.8	1.8	1.8	1.8	1.8	2.6	2.6	2.6	2.6	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	
SEPA	21			21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	
Nextera Wind REC's(Out of State)	150																					
Salem Energy Systems LLC REC's	60			30.0																		
Other Renewable Resources/REC's needed													53.6	239.0	243.8	250.0	256.4	263.0	269.7	276.6		
Demand Side Management (6)																						
DEMAND SIDE MANAGEMENT PROGRAMS:(activated during peak hours)																						
	# Customers	Demand Reduction(MW)	Hours in DSM																			
Residential Water Heaters	23,659	7.56	98 hours	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	
Coincident Peak Commercial/Industrial Consumers	30	8.83	98 hours	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	
Residential Air Conditioners	26,470	8.65	98 hours	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	
Total DSM				25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	
2008 Peak- June 9th, 2008 HE 6:00pm --558 MW																						
2009 Peak- August 10th, 2009 HE 3:00pm --510 MW																						

1. Net Peak is EnergyUnited's peak net of load management measured at generation.
2. All purchases are 100% firm with reserves provided by the supplying entity.
3. The term of the initial purchase with Morgan Stanley is 7 years beginning in 2004. All current and future resources provided by Morgan Stanley are firm; the Morgan Stanley purchase is a network resource recognized by Duke Transmission. Resources provided by Morgan to serve load in the Duke control area will come from resources in the Duke control area or through imports made with firm transmission at interties with Southern, AEP, and Yackin. These firm transmission purchases have been designated in the application with the transmission provider.
4. The initial term of the purchase with Southern Power/Southern Company is September 1, 2006 thru December 31, 2025. All current and future resources provided by Southern are firm; the Southern purchase is a network resource recognized by Duke Transmission. Resources provided by Southern will come from resources in the Duke control area or through imports made with firm transmission at the Duke/Southern intertie. These firm transmission purchases have been designated in the application with the transmission provider or will be designated prior to the start of the start of applicable resource. Under this contract, Southern is obligated to provide all necessary reserve capacity up to 15% of EnergyUnited Peak Load
5. Energy values are measured at generation.
6. Demand Side Management allows us to reduce 21MW during peak periods at our option using load management devices and backup generation.

2009 ncuc IRP filings  
winter (Table 1.3)

11/25/2009

Table 1.3: EnergyUnited Total Projected Winter Load and Capacity (2009 Load Forecast)

EnergyUnited				2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
LOAD REQUIREMENTS:																		
LOCATION	FUEL SOURCE	CAPACITY DESIGNATION																
PEAK BEFORE ENERGY EFFICIENCY PROGRAMS (MW) (1) (6)				577.7	579.4	582.0	586.8	599.7	613.0	626.7	640.8	655.3	670.2	685.2	700.5	716.4	732.7	749.4
Less: Impact of anticipated energy efficiency programs				(0.3)	(1.4)	(4.9)	(7.5)	(10.5)	(10.6)	(12.5)	(12.6)	(12.7)	(12.8)	(12.9)	(12.9)	(13.0)	(13.1)	(13.2)
PEAK NET OF ANTICIPATED ENERGY EFFICIENCY PROGRAMS				577.4	578.0	577.1	579.3	589.2	602.4	614.2	628.3	642.6	657.5	672.3	687.6	703.4	719.6	736.2
Purchased Resources: (2)																		
NCEMC Existing Resources																		
Catawba Nuclear Station	Duke Control Area	Nuclear	Base	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0
AEP Purchase	Duke Control Area	Coal	Base	26.0														
CP&L SOR A	Duke Control Area	Mix	Base	29.0														
SCE&G Intermediate Resource	Duke Control Area	Gas	Intermediate	32.0	32.0	32.0												
AEP Baseload Resource	Duke Control Area	Mix	Base	19.0	19.0	19.0												
Dominion PPA	Duke Control Area	Mix	Intermediate	19.0	19.0	19.0	19.0	19.0										
Total NCEMC Existing Resources				204.0	149.0	149.0	98.0	98.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0
SEPA	Southeast		Base/Peaking	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Morgan Stanley Purchases (3)																		
Total Morgan Stanley Purchases	Various	Mix	Base/Intermediate/Peaking	265.0														
Southern Power/Southern Company Purchases (4)																		
Total Southern Purchases	Various	Mix	Base/Intermediate/Peaking	92.4	413.0	412.1	465.3	475.2	507.4	519.2	533.3	547.6	562.5	577.3	592.6	608.4	624.6	641.2
TOTAL RESOURCES (MW)				577.4	578.0	577.1	579.3	589.2	602.4	614.2	628.3	642.6	657.5	672.3	687.6	703.4	719.6	736.2
RESERVE CAPACITY (MW) (4)				86.7	86.9	87.3	88.0	90.0	92.0	94.0	96.1	98.3	100.5	102.8	105.1	107.5	109.9	112.4
REPS Resources																		
ANNUAL ENERGY BEFORE ENERGY EFFICIENCY PROGRAMS (GWH) (5)				2,506.1	2,527.5	2,551.9	2,591.9	2,645.7	2,701.0	2,757.9	2,816.3	2,876.3	2,937.4	2,999.5	3,063.3	3,128.9	3,196.2	3,265.4
Less: Impact of anticipated energy efficiency programs				(0.8)	(2.0)	(45.9)	(70.7)	(99.4)	(99.8)	(116.6)	(117.3)	(118.1)	(118.9)	(119.7)	(120.5)	(121.3)	(122.2)	(123.1)
NET ANNUAL ENERGY				2,505.2	2,525.5	2,506.0	2,521.2	2,546.3	2,601.2	2,641.2	2,698.9	2,758.2	2,818.5	2,879.8	2,942.8	3,007.5	3,074.0	3,142.3
Capacity from renewable resources (MW):																		
Iredell Transmission, LLC	Iredell County, NC	Methane Gas	Base	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Anticipated Solar Resources	TBD	Solar	N/A		0.3	0.3	1.0	1.0	1.0	1.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
SEPA	SouthEast		Intermediate/Peaking	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Other Anticipated Renewable Resources (TBD)	TBD	TBD	TBD			4.5	4.7	4.9	5.0	13.4	13.7	14.1	31.9	33.0	34.1	35.2	36.3	38.0
Total Anticipated Renewable Capacity				19.0	19.3	23.8	24.7	24.9	25.0	33.4	34.7	35.1	53.9	55.0	56.1	57.2	58.3	60.0
Energy from renewable resources (GWH):																		
Iredell Transmission LLC	REC's Carried Forward			25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Anticipated Solar Resources	32			0.8	1.8	1.8	1.8	1.8	2.6	2.6	2.6	2.6	3.9	3.9	3.9	3.9	3.9	3.9
SEPA	21			21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Nextera Wind REC's (Out of State)	150																	
Salem Energy Systems LLC REC's	60			30.0														
Other Renewable Resources/REC's needed											53.6	239.0	243.8	250.0	256.4	263.0	269.7	276.8
Demand Side Management																		
DEMAND SIDE MANAGEMENT PROGRAMS: Activated during Peak Hours				# Customers	Demand Reduction	Hours in DSM												
Residential Water Heaters	23,659	7.56	0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Coincident Peak Commercial/Industrial Consumers	30	8.83	42 hours	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Residential Air Conditioners	26,470	8.65	0															
Total DSM				11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
Annual Peak Demands (6)																		
2008 Peak-Jan 25th, 2008 HE 8:00am -555 MW																		
2009 Peak-Jan 17th, 2009 HE 9:00am -607 MW																		

1. Net Peak is EnergyUnited's peak net of load management measured at generation.
2. All purchases are 100% firm with reserves provided by the supplying entity.
3. The term of the initial purchase with Morgan Stanley is 7 years beginning in 2004. All current and future resources provided by Morgan Stanley are firm; the Morgan Stanley purchase is a network resource recognized by Duke Transmission. Resources provided by Morgan to serve load in the Duke control area will come from resources in the Duke control area or through imports made with firm transmission at interties with Southern, AEP, and Yadkin. These firm transmission purchases have been designated in the application with the transmission provider.
4. The initial term of the purchase with Southern Power/Southern Company is September 1, 2006 thru December 31, 2025. All current and future resources provided by Southern are firm; the Southern purchase is a network resource recognized by Duke Transmission. Resources provided by Southern will come from resources in the Duke control area or through imports made with firm transmission at the Duke/Southern intertie. These firm transmission purchases have been designated in the application with the transmission provider or will be designated prior to the start of the start of applicable resource. Under this contract, Southern is obligated to provide all necessary reserve capacity up to 15% of EnergyUnited Peak Load
5. Energy values are measured at generation.
6. Demand Side Management allows us to reduce 12MW during peak periods at our option using load management devices and backup generation.

## 2. Generating Facilities:

EnergyUnited does not own any generating units and does not have any plans to purchase or construct electric generating facilities.

The only non-utility generator currently in service on the EnergyUnited system is a 10KW solar photovoltaic unit owned by Aquesta Bank in Cornelius, North Carolina. This unit is designated to be a summer peaking unit.

## 3. Reserve Margins:

See Table 1.2 and Table 1.3 for more information. Under EnergyUnited's contract with Southern Power Company, Southern Power is obligated to provide EnergyUnited for up to 15% of peak load to account for EnergyUnited's reserve margin.

## 4. Wholesale Contracts for the Purchase and Sale of Power:

### a. Wholesale Purchased Power Contracts:

<u>Resource</u>	<u>LOCATION</u>	<u>FUEL SOURCE</u>	<u>CAPACITY DESIGNATION</u>	<u>MW</u>	<u>Expiration Date</u>
Catawba Nuclear Station	South Carolina	Nuclear	Base	79.0	N/A
AEP Purchase	PJM	Coal	Base	26.0	2010
CP&L SOR A	North Carolina	Mix	Base	29.0	2010
Southern Power	Various	Mix	Base/Inter/Peaking	132.0	N/A
SCE&G Intermediate Resource	South Carolina	Gas	Intermediate/Peaking	32.0	2012
AEP Baseload Resource	PJM	Mix	Base	19.0	2012
Dominion PPA	PJM	Mix	Intermediate/Peaking	19.0	2014
SEPA	Southeast	Hydro	Intermediate/Peaking	16.0	N/A
Morgan Stanley	Various	Mix	Base/Intermediate	249.0	2010
Iredell Transmission	Iredell County	Methane	Base	3.0	2018

## 5. Transmission Facilities

EnergyUnited has no transmission facilities of 161 kV or higher.

## 6. Demand-Side Management

- Existing Programs: See Table 1.2 and 1.3 for details of demand-side management programs currently offered.
- Proposed Programs: EnergyUnited currently has no new proposed programs.
- Evaluated but Rejected Programs: EnergyUnited currently has no evaluated but rejected programs.
- Consumer Education Programs: EnergyUnited produces a monthly communication with its membership that offers ongoing education regarding renewables and conservation. EnergyUnited has added a renewable section to its public website to



keep members informed of new programs and opportunities to reduce consumption and increase awareness of renewables.

7. **Assessment of Alternative Supply-Side Energy Resource:** It is the opinion of EnergyUnited that there are sufficient resources and potential resources to meet the requirements of the REPS.
8. **Evaluation of Resource Options:** EnergyUnited is continuing to evaluate its resources options in an effort to create the most reliable and affordable portfolio for its membership.

## **Section II: EnergyUnited's Short Term Action Plan**

EnergyUnited hopes to commission its 1 MW solar farm by March 2010, which will cover one third of EnergyUnited's 2018 solar requirements. In the coming months EnergyUnited plans to continue deployment of its current energy efficient programs to its membership as well as continue to create Consumer Education Programs.

## **Section III: EnergyUnited's REPS Compliance Plan**

See Table 1.2 and 1.3 regarding REPS resources. Beginning 2010, EnergyUnited plans to begin to fulfill the solar wedge requirement through its construction of the 1 MW solar array.

EnergyUnited will utilize its landfill gas generation in Iredell County along with REC's from SEPA, Salem Energy, and Nextera Energy to begin to meet the requirements of the REPS.

EnergyUnited anticipates the roll out of Energy Efficiency programs by 2010 along with several other potential renewable resources that can be utilized to meet the compliance levels each year.

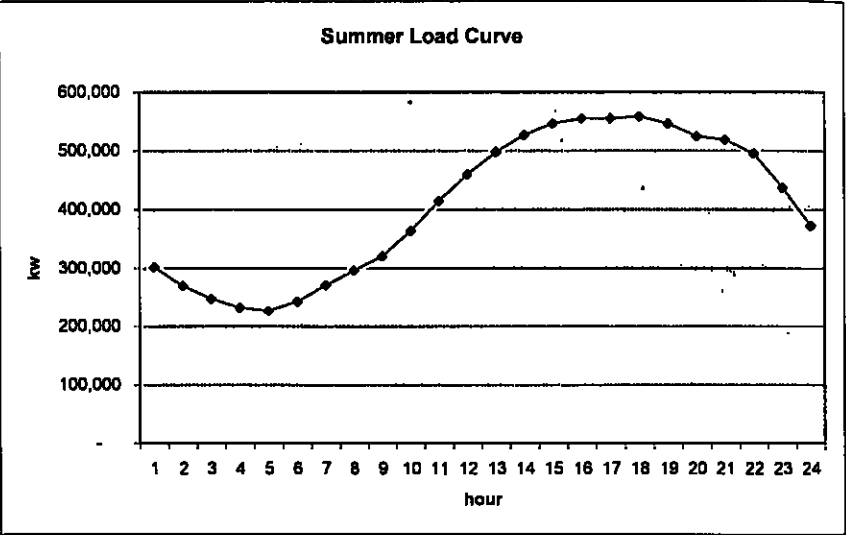
EnergyUnited is currently in discussions with third parties regarding its obligation for the Swine and Poultry component of the REPS. At this time no formal plan has been adopted to meet this part of the mandate. EnergyUnited will continue to evaluate options for the most cost-effective solution to this requirement.

As of September 22<sup>nd</sup> EnergyUnited's two energy efficiency programs were approved by the Commission in Docket Number EC-82 Sub 10. Under the heat pump rebate program members are given up to a \$300 rebate for the installation of a high efficiency heat pump of at least 14 SEER. A member will receive a \$150 rebate for the installation of a 14 SEER unit and a \$300 rebate for the installation of a 15 SEER unit. This program is open to all members. Under EnergyUnited's Commercial and Industrial Lighting Program members are encouraged to retrofit existing lighting with High Efficiency lighting. Participants will be paid \$0.30 per watt saved by the new lighting. EnergyUnited will utilize a third party for measurement and verification of the energy savings from these programs.

Table 1.4 - EnergyUnited Summer and Winter Peak Load Duration Curves

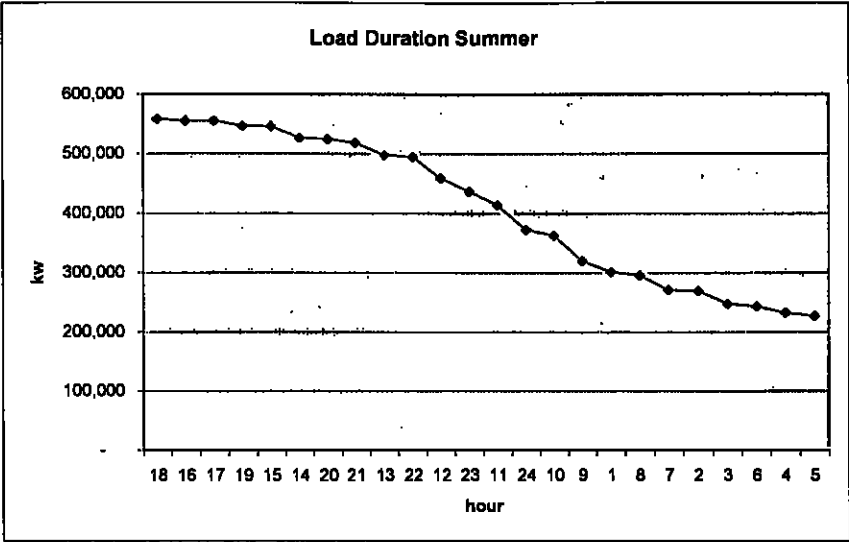
Summer 2008

Year	Month	Day	Hour	EMC Total
2008	6	9	1	301,646
2008	6	9	2	269,674
2008	6	9	3	247,694
2008	6	9	4	232,148
2008	6	9	5	227,026
2008	6	9	6	243,101
2008	6	9	7	270,852
2008	6	9	8	295,711
2008	6	9	9	320,060
2008	6	9	10	362,885
2008	6	9	11	413,831
2008	6	9	12	459,108
2008	6	9	13	497,547
2008	6	9	14	526,515
2008	6	9	15	545,897
2008	6	9	16	555,085
2008	6	9	17	554,888
2008	6	9	18	558,066
2008	6	9	19	546,251
2008	6	9	20	524,291
2008	6	9	21	518,357
2008	6	9	22	495,004
2008	6	9	23	436,994
2008	6	9	24	372,200



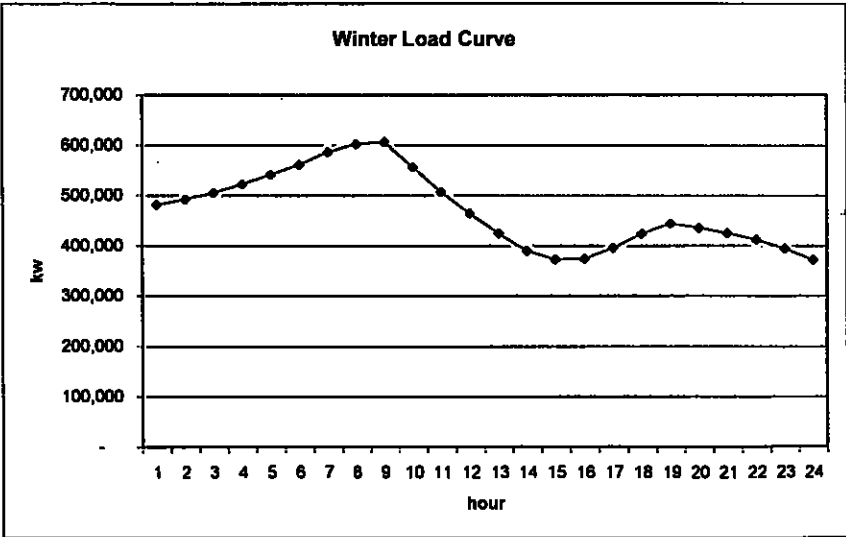
Load Duration Information

Hour	EMC Total
18	558,066
16	555,085
17	554,888
19	546,251
15	545,897
14	526,515
20	524,291
21	518,357
13	497,547
22	495,004
12	459,108
23	436,994
11	413,831
24	372,200
10	362,885
9	320,060
1	301,646
8	295,711
7	270,852
2	269,674
3	247,694
6	243,101
4	232,148
5	227,026



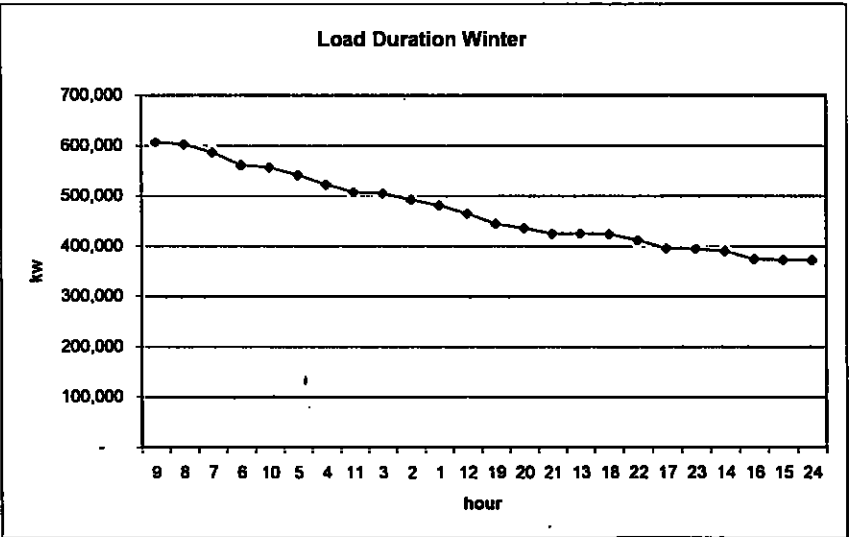
Winter 2008/2009

Year	Month	Day	Hour	EMC Total
2009	1	17	1	481,238
2009	1	17	2	491,639
2009	1	17	3	505,465
2009	1	17	4	522,535
2009	1	17	5	541,194
2009	1	17	6	560,964
2009	1	17	7	586,195
2009	1	17	8	602,572
2009	1	17	9	606,619
2009	1	17	10	556,571
2009	1	17	11	506,959
2009	1	17	12	464,769
2009	1	17	13	424,373
2009	1	17	14	389,845
2009	1	17	15	372,273
2009	1	17	16	373,633
2009	1	17	17	395,620
2009	1	17	18	423,877
2009	1	17	19	443,976
2009	1	17	20	435,099
2009	1	17	21	424,407
2009	1	17	22	412,001
2009	1	17	23	393,849
2009	1	17	24	371,804



Load Duration Information

Hour	EMC Total
9	606,619
8	602,572
7	586,195
6	560,964
10	556,571
5	541,194
4	522,535
11	506,959
3	505,465
2	491,639
1	481,238
12	464,769
19	443,976
20	435,099
21	424,407
13	424,373
18	423,877
22	412,001
17	395,620
23	393,849
14	389,845
16	373,633
15	372,273
24	371,804



		<b>2009</b>		<b><u>2010</u></b>		<b><u>2011</u></b>
Avoided Cost(/kWh)	\$	0.0490	\$	0.0490	\$	0.0550

Anticipated Compliance Costs	\$	800,000.00	\$	820,000.00	\$	1,000,000.00
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Cost Caps for Compliance(Per Account/Year)						
Residential	\$	10.00	\$	10.00	\$	10.00
Commercial	\$	50.00	\$	50.00	\$	50.00
Industrial	\$	500.00	\$	500.00	\$	500.00

REPS Rider						
Residential	\$	6.12	\$	6.12	\$	6.12
Commercial	\$	30.60	\$	30.60	\$	30.60
Industrial	\$	307.44	\$	307.44	\$	307.44