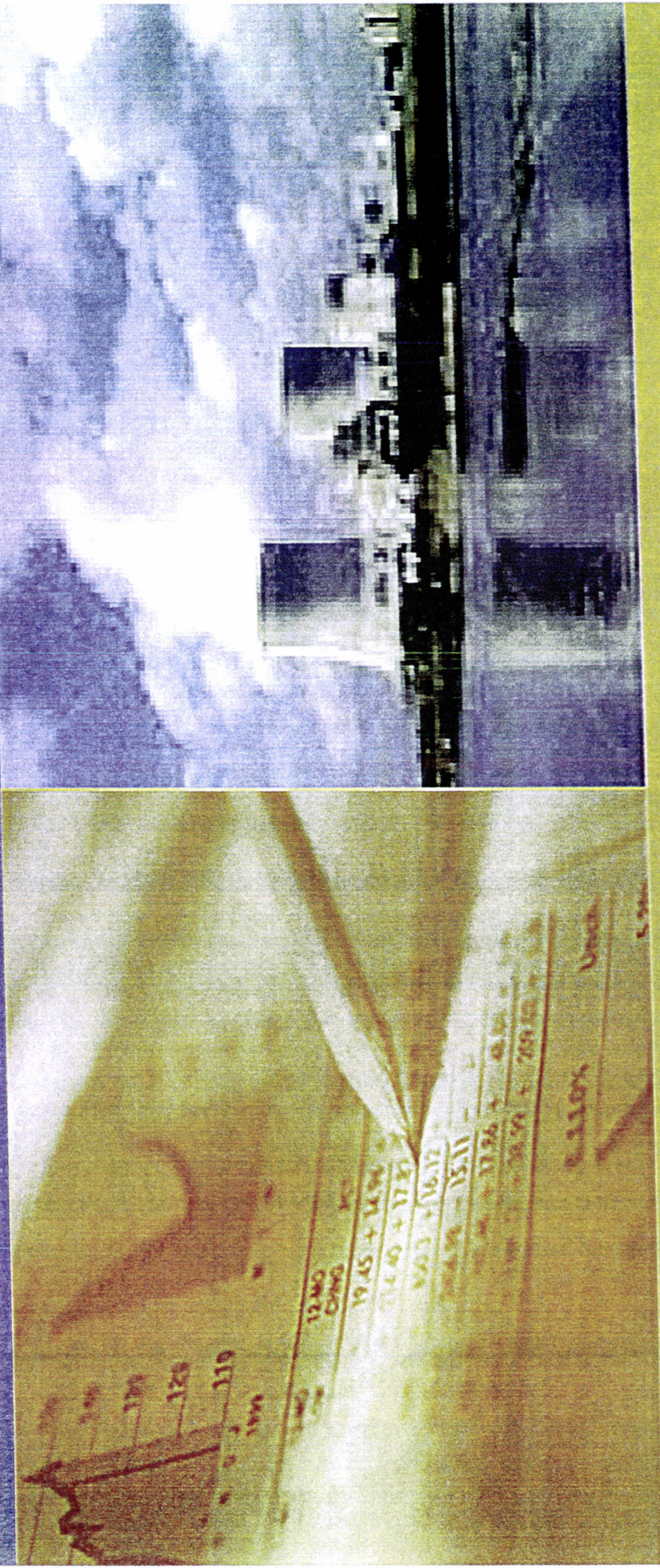


Fitzpatrick Handouts 9/10

<u>Electricity Prices</u>	
Actual Costs	
2009 Average Cost for Residential Customers	\$53.05 MWH
2009 Average Cost of Power Purchased from PPL Montana	\$47.95 MWH
2009 Average Cost of Short Term Market Purchases	\$42.22 MWH
Mid-C Price Range - First Six Months of 2010	- \$1.16 to \$51.14 MWH
Average Mid-C Price - First Six Months of 2010 ²	\$33.22 MWH
Average Cost of Short Term Market Purchase 2nd Quarter (April-June) 2010	\$20.80 MWH
15 MW Hydro Unit 20-Year Levelized Supply Cost ¹	\$69.51 MWH
222 MW Share of Colstrip Unit 4 20-Year Levelized Supply Cost ²	\$61.24 MWH
Electricity Supply Proposals (BIDS)	
2009 Renewable RFI Price Range of 20 Proposals	\$54.00 to \$156.10 MWH with escalator
2009 Renewable RFI Average Price of 20 Proposals	\$80.14 MWH with escalator
2009 Biomass Proposals Price Range	\$95.00 to \$150.00 MWH with escalator
Feasibility Studies/Price Forecasts	
19 MW Prototypical Biomass Plant 20-Year Levelized Supply Cost ¹	\$101.50 MWH
Mid-C Price Forecast (Average Price) 20-Year Levelized Supply Cost ²	\$59.14 MWH
Avoided Cost Calculation	
PSC Order No. 6973d, May 2010	\$69.21 MWH
¹ Levelized using an 8.46 discount rate.	
² Average Mid-C Price obtained by developing a weighted average of heavy load (56.1% of year) and light load (43.9% of year) prices. Based on October 6, 2009 price update.	
August 17, 2010 ~ Prepared by:	
John S. Fitzpatrick	
NorthWestern Energy	
208 N. Montana Ave., Suite 205	
Helena, MT 59601	

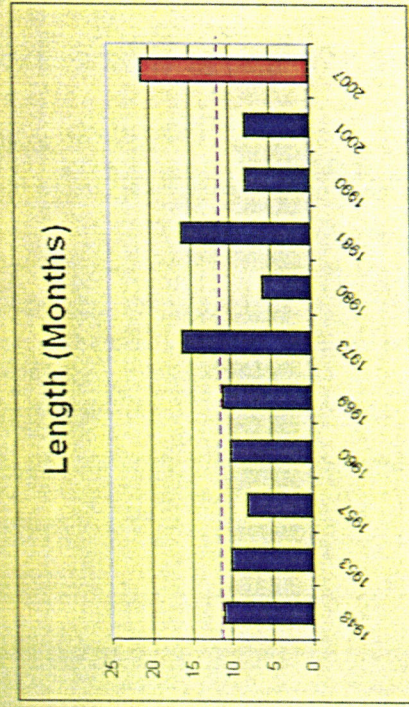
Flypaper Handouts 9/10

Post-Recession Outlook for the Economy and the Energy Industry

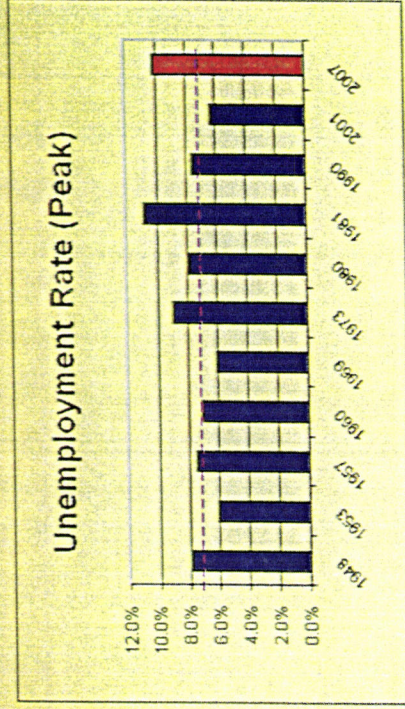


Dr. John Caldwell
Director of Economics, EEI

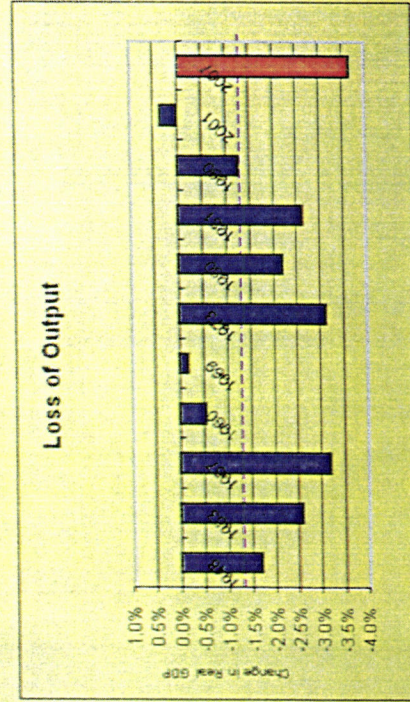
How Serious Was This One? Comparison with Past Recessions



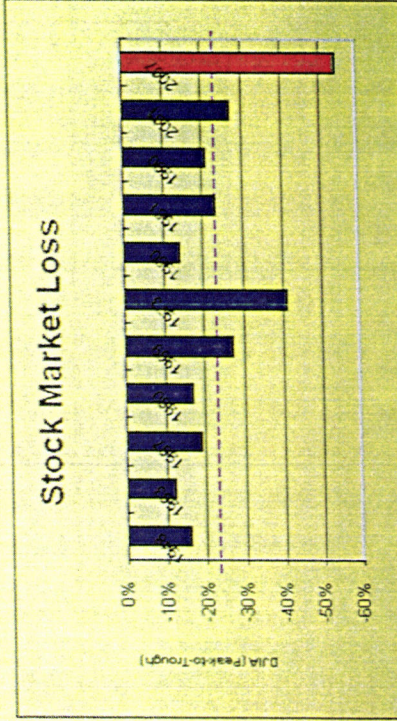
1929 = 42 months



1929 = 25%



1929 = 27%



1929 = 89%

The Jobs Challenge

8.4 million	Jobs lost since recession began
+ <u>2.7 million</u>	Jobs needed to absorb new workers
11.1 million	Total jobs needed to fill current gap

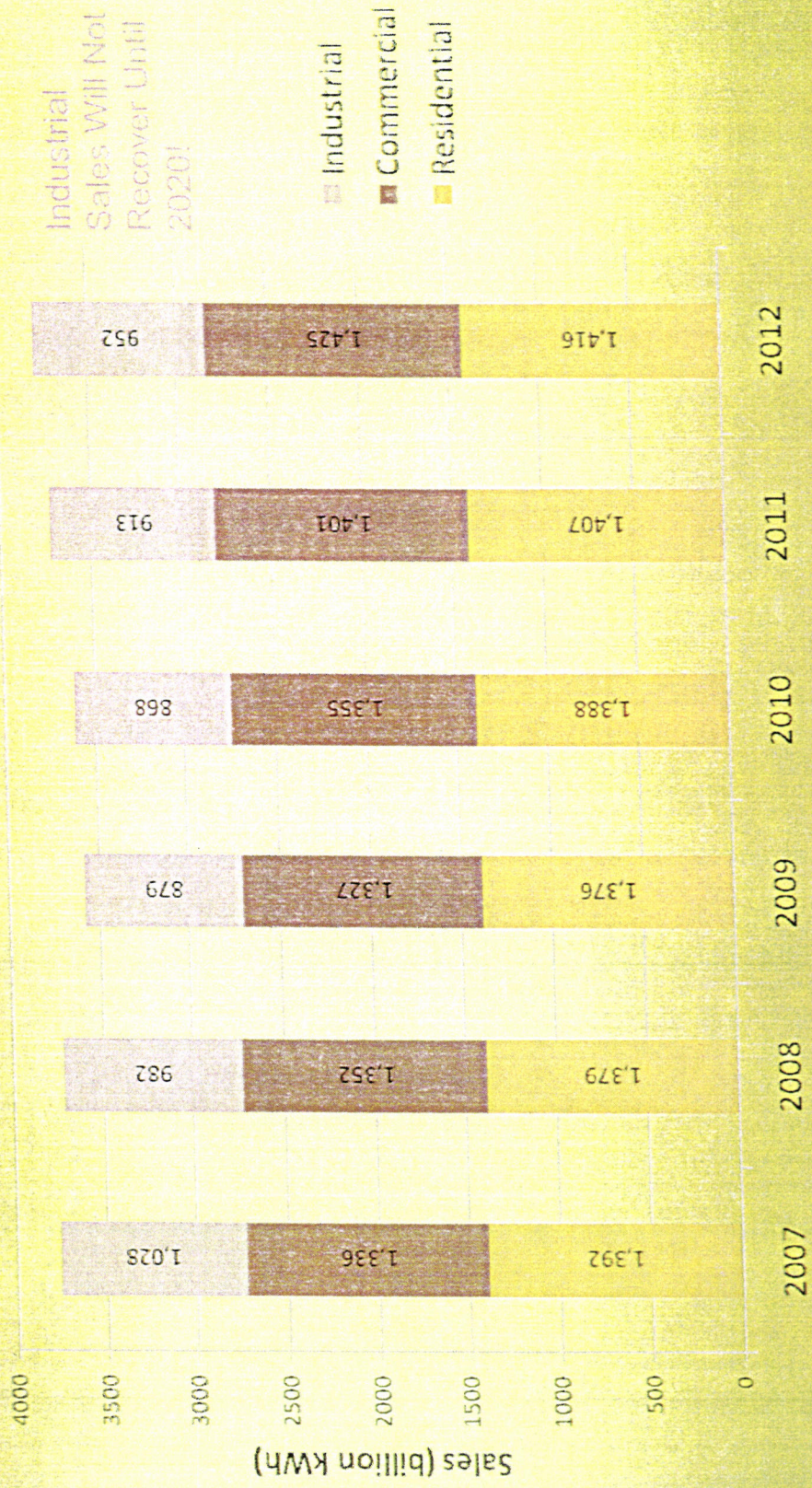
To fill this gap (and accommodate future entrants into the workforce), **400,000 jobs** would have to be created per month for the **next three years**.

In the past 349 months (i.e., since January 1981), monthly job growth was 400,000 or higher **only 14 times**.

The highest 3-year average during this time frame has been **275,000 jobs/month**.

How Soon Will The Electric Industry Pull Out of the Recession?

Electricity Sales Are Expected to Recover Slowly



Source: Actual and forecast data – Energy Information Administration, Annual Energy Outlook 2010

John Lake Harbor

<u>Unit</u>	<u>Fuel</u>	<u>Generating Capacity</u>	<u>Percentage</u>
Lewis & Clark Station Sidney, MT	Coal	52 Mw	29%
Glendive Turbine Glendive, MT	Gas	76 Mw	55%
Miles City Turbine Miles City, MT	Gas	26 Mw	
Diamond Willow Baker, MT	Wind	30 Mw	16%
Total MDU Generation in Montana		184 Mw	100%
Peak Montana Load [7/23/07]		128 Mw	

Cost of Diamond Willow

Cost of Diamond Willow (Phase I, 19.5 Mw) – \$39,000,000 or \$2,000/Kw
Cost of Diamond Willow (Phase II, 10.5 Mw) – \$25,000,000 or \$2,380/Kw

Revenue Requirement for Diamond Willow (with PTC¹)

Phase I	$\$39,000,000 \times .18^2 = \$7,020,000$ per year, without PTC
Phase I	$\$39,000,000 \times .14^3 = \$5,460,000$ per year, with PTC
Phase II	$\$25,000,000 \times .18^2 = \$4,500,000$ per year, without PTC
Phase II	$\$25,000,000 \times .14^3 = \$3,500,000$ per year, with PTC

Total Cost of Diamond Willow with PTC [which is approximate cost of 15% by 2015 RPS]⁴
 $\$5,460,000 + \$3,500,000 = \$8,960,000$ per year

Revenue Requirement Associated with 25% by 2025 RPS

30 Mw Diamond Willow (Phases I and II)	\$ 8,960,000 per year
20 Mw Additional Wind, with PTC [$\$50,000,000 \times .14$] ⁵	\$ 7,000,000 per year
20 Mw Additional Wind, w/o PTC [$\$50,000,000 \times .18$] ⁵	\$ 9,000,000 per year
Annual Cost of 25/25 RPS	\$15,960,000 to \$17,960,000 per year

¹The federal renewable production tax credit (PTC), set to expire in 2012, is 2.1 cents per Kwh.

²The total revenue requirement associated with a dollar of wind investment is 18 cents, consisting of return, depreciation, and taxes, together with the operating and maintenance expense. This revenue requirement does not include the federal renewable production tax credit (PTC).

³This lower revenue requirement of 14 cents per dollar reflects the PTC.

⁴At current load (not projected load in 2015), Diamond Willow Phases I and II nearly provide 15% of Montana-Dakota's energy requirements in Montana, as required by the Montana RPS for 2015 compliance.

⁵At current load (not projected load in 2025), Montana-Dakota would need approximately twice the amount of additional wind as Diamond Willow Phase II. Doubling the cost of Phase II is an extremely conservative estimate of the additional cost associated with a 25/25 RPS standard, as it prices the cost of the additional renewable resources at the 2009-2010 cost of Phase II. The actual cost, which would not be incurred for 15 years, would be much greater. Additionally, this simplified calculation assumes no load growth for the next 15 years, which would increase the amount of additional renewable resources needed to meet the 25/25 standard.