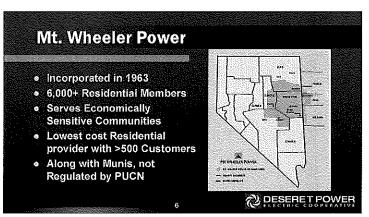
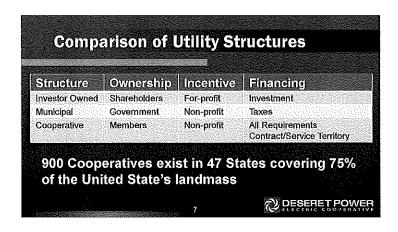
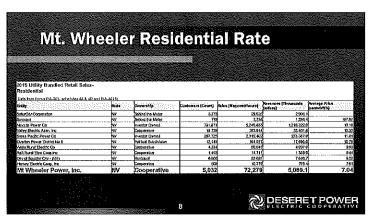


What is an Electric Cooperative? Grassroots organizations Democratically elected representatives Locally controlled Cooperative Principles?









Impact of Stranded Costs

Current Energy Rate

- + Stranded Cost Allocation
- + Profit
- + Infrastructure upgrades (e.g., metering & comm.)
- + Costs of market design and operation
- Credits?
- Reductions in other costs?

New Energy Rate

DESERET POWER

Impact to All Mt. Wheeler Members

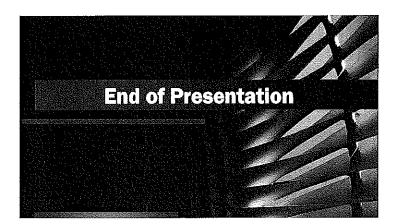
Assumptions include:

- ☐ No cost shifting/subsidizing of stranded costs
- □ All utilities and ratepayers subject to equal stranded costs
- □ NV Energy 2015 Total Load: 29,912,147 MWh
- □ NV Energy Stranded Costs: \$7.4 Billion
- □ Amortized over 24 years @ 3% = 1.46 cents/kWh

30% increase to energy component of rate

10

DESERET POWER





Representing Nevada's Rural Electric Cooperatives, Power Districts, and Municipal Utilities.

Prepared for the Covernor's Committee on Energy Choice Workgroups Generation, Transmission & Delivery Energy Consumer & Investor Impacts Augus 17, 2017

> Richard "Hank" James Executive Director NREA

NEVADA RURAL ELECTRIC ASSOCIATION



- Founded in 1974,NREA members are not-for-profit associations of persons who procure and distribute electric service on behalf of their owner-members:
 - · One municipal distribution system
 - · Six rural electric cooperatives
 - Two power districts.
- NREA Advocates for owner-member/consumers with national and state legislators, agencies, local governments, and like-minded organizations about the importance of the services our utility members provide.

Governance



- Each NREA member is an individual association of people with a common purpose to procure and distribute aggregated energy load solely for the members of their Association.
- Local, democratically elected boards are at the center of each member's electric distribution system with a common mission to distribute:
 - · safe, reliable, and low-cost electric service for their owner-member/consumers
- PUCN oversight is limited as prescribed in various NRS enabling statutes relative to the Association's entities:

Electric Cooperatives --- Power Districts --- Municipalities.

NREA Utility Members Do Not Have "Customers"



- Net revenues are allocated back to the Owner/Members as capital credits... Either refunded by check or utility bill credit on a pro-rata basis. (Cooperatives)
- For Public Utility Districts and Municipalities, net revenues are returned to the consumer manifested in lower rates or lower taxes.

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Fundamental Characteristics of NEVADA'S RURAL ELECTRIC DISTRIBUTION SYSTEMS



- NREA Members currently offer meaningful choice to their member/consumers...
 - In their power supply options, their rates, and in the make-up of their Boards'.
 - In their power supply options, their rates, and in the make-up of their boards.
 All owner-members have one vote regardless of the amount of energy purchased.
- Provide electricity over ~50% of the land and serve ~10% of the Nevada's population.
- NREA utility members serve an average 5.2 consumers per mile of distribution power line, compared to over 34 consumers per mile.
- Nevada's rural distribution systems seek to acquire and distribute least-cost power supply resources with high reliability (99,99%) to meet native demand as they arise.

NREA UTILITY MEMBERS



- Lincoln County Power District No. 1, Pioche, NV
- Mt. Wheeler Power, Ely, NV
- Wells Rural Electric Company, Wells, NV
- Overton Power District #5, Overton, NV
- Boulder City Electric Utility, Boulder City, NV
- Raft River Rural Electric, Malta, ID
- Harney Electric Cooperative, Hines, OR
- · Surprise Valley Electrification Corp, Alturas, CA
- · Plumas-Sierra Rural Electric Co-op, Portola, CA

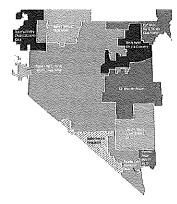
Fundamental Characteristics of NEVADA'S RURAL ELECTRIC DISTRIBUTION SYSTEMS



- The democratic structure of NREA member Boards
 - Enable each utility system Board to make progressive changes to their own energy policies... only if their owner-members/consumers want change.
 - All owner-members have one vote regardless of the amount of energy purchased.
- Not vertically integrated (unique exception: Mt Wheeler Deseret Power)
 - · Aggregated community load within each Association's Service Areas
 - Procure energy from providers of choice
 - Net metering for individual consumer-owned Distributed Generation
- · NREA utility members have no excess margin component when setting rates.
 - Rate components = Energy + Demand + Cost of Business

LOCATION OF NEVADA'S RURAL ELECTRIC UTILITIES





Summary by the Numbers



• Utility Members: 9

• Renewable/Carbon-Free Portfolio: ~65%

• Nevada Consumers: 41,562

• Distribution - 12,248 Miles - Transmission 1,664 Miles (Local)

• Owner-Member/Consumers per mile of distribution line: 5.2

• Nevada Service Territory: 48,216 square miles

• Employees: 266

• Combined Load: 2,731,475 MWh - Peak Load: 502 MW (cr2015)

• Elected Owner-Member/Consumer Directors: 68

Transition to an Open Energy Market



- · As defined in a previous ECI Committee meeting this Spring, Nevada's new regulatory framework:
 - ..."May include economic and orderly divestiture of generation and limits on corporate affiliates serving as Retail Energy Providers". (Source: Nevadans for Affordable Clean Energy Choices, April, 2017)
- · NREA members have procured long-term energy-supply contracts with the Federal Government
 - · Carbon-free hydro power through BPA (North) and WAPA (South)
 - · From 11 to 68 years induration
 - · "Take or Pay" obligation

NREA Member Segmentation for Wholesale Power Supply



- · ECI will uniquely impact each NREA member according to each individual system's Board Policies.
- · Common factors:
 - "Take or Pay" contract obligations for all
 - · Five NREA Members: "All Requirements" customers of BPA (North)
 - Two Power Districts and one Municipal: Combination of Federal hydro contracts and Market-based purchases (South)
 - Interstate service for Six NREA members. (exceptions: OPD, LPD, BC)
 - Mt Wheeler Power: Unique G & T relationship

Wells Rural Electric Company



Stranded Investment	1,141,414,41	H (1981)		Sept.	111			40,000	jain i	- 4
	Description	1996		-01	5.00	Annual Cost	Term	in Years	Extens	ded Cost
Bonneville Power Administrat		wer Supply	Contract			\$29,707,392		11	\$125,	781,312
Northwest Energy Manageme		3.00	Arriva III	1000	100	\$1,440,000		1.1	tradition of	4.1 (1)
Trout Creek Hydroelectric Ger	neration Plant	1000	1,1,272	50x 1.09	325	\$33,583		111111111	125,500	4 F.
Transmission ₂	10000	- 1.55	A		1. "	\$199,248	100	11	52	191,72
Obsolete meters	A	No. 119.		5 G	311	a Nijinina.	ing an	Sec. 5.	14 1	100
		Stranded	l Investme	at Subtoti	al .	\$31,360,223	100	1971	5328	973,04
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Long-term debt	1.557	39.000	د رکاد کی	4.15%	fant.	\$493,266	11.1	9.7 1.77	\$14	.013.06
Post-retirement benefits					100	52,814,088		4.5		11.
			Taylor guided	2000	31.57	13.200	(A.A.)	1311	303 N.A	11111
international Brotherhoo	ed of Electrical Wo	rkers Local	1240? Lab	or Contrac	at 🗀				s did a	
1.00	Member E	quity (Alloci	ed as Capi	ita) Credit:	s) :	\$600,000	111	7.75	\$18,	,871,72
		Contractu	d Obligation	on Subtots	ai i	\$3,414,088	13.	10.00	S32	882,78

Overton Power District #5



Unfunded Portion of Contracts

(Future Amount to be Paid in 2017 Dollars Until Contract Term Expiration)

	WAPA-BCP	Market Contract	WAPA-SECAIP	Total
1/1/2018 – Expiration	\$78,550,972.00	\$113,680,760.18	\$8,873,432.87	\$201,105,165.07
1/1/2018 - 7/31/2023	\$ 6,962,852.89	\$ 89,425,567.35	\$7,028,957.35	\$103,417,377.59
8/1/2023 — Expiration	\$71,588,119.18	\$ 24,255,192.83	\$1,518,029.21	\$ 97,361,341.22
				\$401,883,883.88

Lincoln County PD #1



- LCPD has a contract for hydroelectric power that extends through September 30, 2067
- The value of that contract in 2017 dollars is \$106,892,062
- The contract is "Take or Pay" and does not provide for early termination
- If LCPD were precluded from selling this hydroelectric power to its customers as a result of the Energy Choice initiative:
 - LCPD would continue to have to pay for its hydroelectric power
 - The cost this power represents approximately 40% of LCPD's operating budget and equates to \$2,137,841 per year in 2017 dollars

Mt Wheeler Power



Stranded Investment				
Description	Annual Cost	Term in Years	Extended (Cost
Snake Valley Hydro Generation	\$0			
NITSA Transmission Contract (3) not including assellary services	\$1,113,000	17	\$ 18,921,000.	00
Obsolete meters(4)				
Undepredated Plant Assets owned by members			5 37,668,709.	00
Standed Investment Subtotal	\$1,113,000	1	\$ 56,589,709.0	00
Contractual Obligations				
Deseret Power Wholesale Contract (through 2080)	\$9,100,000	63	\$ 573,300,000.0	OG-
PP Contract Wholesale Power Contract (Through 2077) Current Debt				
obligation	\$0		\$ 20,707,420	60
Western Area Power Administration Contract [Through 2025] [2]	\$889,785	9	\$ 8,000,065.9	00
Long-term debt (Annual P & I)	\$2,125,000		\$ 15,250,000	00
Post-retirement benefits	\$0			
International Brotherhood of Electrical Workers Local 1240 Labor Contract				
Member Equity (ABocted as Capital Credits)	\$825,000		\$ 27,339,358.	41
USDA REDIG Community Facilities Obligations (NP County Anticle) Center)			\$ 1,000,000.0	00
Contractual Obligation Subtotal	\$12,939,785		\$ 645,604,843.4	41

Boulder City



- Boulder City's Hoover Dam and SLCAIP contracts expire on 9/30/2067 and 9/30/2024, respectively. (Take or Pay)
- The value of the hydro contracts from 7/1/2023 through expiration is \$86.4M, based on CY2016 actual hydro cost per MWh, and hydro contract allocations
- If Boulder City were required to replace hydro energy with market purchases, the cost would be \$4.58M annually, based on CY2016 average cost of market energy.
- This amount is in addition to Boulder City's existing market purchases.

Raft River Electric Cooperative

• Long-term debt (Transmission serving Nevada)



\$16,460,000

• Estimated Economic Impact of Energy Choice Initiative

Stranded Investment:

<u>Description</u>	<u>Annual Cost</u>	Term in Years	Extended Cost
BPA Contract (NV)	\$1,818,182	11	\$20,000,000
Other Contractual O	bligations		

NREA's Wholesale Power Supply Resources (Primary)



- · Bonneville Power Administration (BPA) 4 Northern Electric Cooperatives
- · Deseret Power (G &T) • Mt Wheeler Power (Eastern NV)
- Western Area Power Administration (WAPA)
 2 South-Central Power Districts (CRC)
 Boulder City
- Hoover Dam (Direct)
 Boulder City

NREA & ENERGY CHOICE



- · Additional Transition Costs for NREA owner-members in an Open Energy Market Structure would include:
 - · Alternative Power Providers' profit margin (10-15%)
 - · Transmission and retail wheeling costs (TBD)
 - NREA's existing PPA Divestiture/Liquidation costs (\$1 Billion +)
 - · Additional Transition costs

 - Including, but not limited to:
 Automated Meter Infrastructure (if possible)
 - Billing software
 - New regulatory oversight/compliance



Nevada Rural Electric Association Richard "Hank" James Executive Director

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Department of Energy

Bonneville Power Administration P.O. Box 3621 Portland, OR 97208



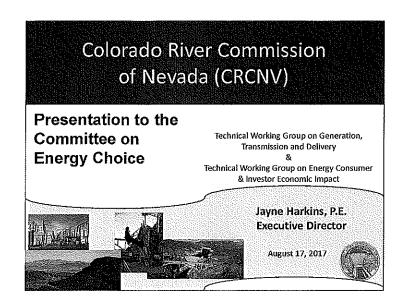
John J. Williams, Constituent Account Executive, Bonneville Power Administration

- 1. BPA: what we are and who we serve
- 2. BPA's service area
- 3. BPA's involvement in Nevada during the state's deregulation process in the late 1990s
- 4. 2001 Energy crisis: BPA created a tier system to provide and protect customers from wholesale market

Celeste Schwendiman, Power Account Executive, Bonneville Power Administration

- 1. The Bonneville Project Act
- 2. The 1980 Northwest Power Act
- 3. Contracts
 - a. Regional Dialogue (Long-Term Power Sales Contract)
 - i. Take or Pay Obligation
 - ii. New Large Single Load
 - b. Net Billing Agreements
 - c. Residential Exchange Agreement/Regional Settlement
 - d. Transmission Contract
 - e. Transfer Service Agreements

-		
	:	

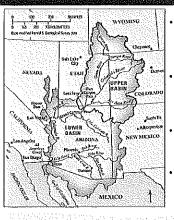


Presentation Outline

- · Colorado River Basin Overview
- · CRCNV History, Organization, and Overview
- Federal Hydropower
 - Management, Contract, Provisions, Benefits
- · State Contract Provisions
 - Realfocation Provisions
 - Benefits
- · State Contractors
 - Full Requirements Contractors
 - Wholesale Non-Utility Contractors
 - Wholesale Utility Contractors
- Summary / Questions

2/17/2017

Colorado River Basin



- The Colorado River runs over 1,400 miles through seven "Basin States": Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming.
- The Basin is divided into the Upper Basin and Lower Basin - each Basin receives an annual allotment of 7.5 million acre-feet of water
- The "Mexican Water Treaty of 1944" apportioned 1.5 million acre-feet of the Colorado River's annual flow to Mexico.
- Nevada's annual allocated share of Colorado River water is 300,000 acrefort.

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CRCNV History

- The CRCNV is an executive agency of the State of Nevada responsible for acquiring and managing Nevada's share of water and hydropower resources from the Colorado River.
- Purpose To protect, receive, safeguard and hold in trust the water and hydropower resources provided from the Colorado River for the benefit of the State of Nevada.
- · Colorado River Benefits to Nevada:
 - Colorado River water.
 - Environmental resources.
 - Hydropower resources.
- CRCNV has been providing these benefits for 81 years.

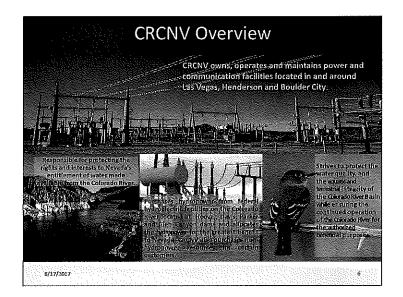
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CRCNV Organization

- Created in 1935 by Nevada State Legislature as Hoover Dam construction was ending, contracts for water and hydropower were put in place.
- Through Nevada statutes that define the CRCNV operations:
 - Has broad statutory authority to buy and sell electricity and build transmission across Nevada (NRS 538.161-538.181).
 - Customer base is limited by NRS 704.787.
 - Is not subject to regulation by the NPUC (NRS 538.181, 704.787).
- CRCNV receives no State General Funds Funding provided by water and hydropower customers.
- · Organization consists of:
 - 7-member Commission that meets monthly.
 - Staff of 33 with 2 Field Offices, all located in southern Nevada.

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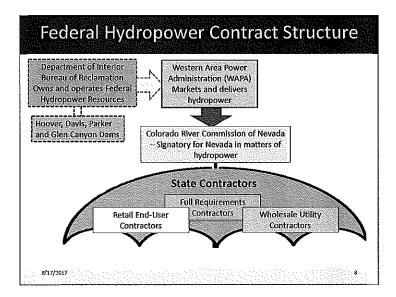
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Federal Hydropower

- The Department of Interior, Bureau of Reclamation owns, operates, and maintains the dams and power plants.
- The Department of Energy, Western Area Power Administration (WAPA) markets and delivers the federal hydropower.
- Two ways federal hydropower is marketed:
 - Federal Regulatory Process and
 - Authorized by Congress in 1934, 1984 and 2011 (Hoover Dam)
- Federal hydropower law requires allocations under specific preference law provisions to non-profit public entities.
 - CRCNV serves as the non-profit preference customer
 - CRCNV allocates within the state under state law

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Federal Contract Provisions

- · Long-term Contracts (40-50 years)
- · Cost-based energy resource, typically below market
- · Limited termination provisions
- · Very little ability to get resource back if given up
- · Restrictions on resale and resource use provisions
- · Accept load in Nevada
- · Within WAPA's marketing area

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State Contract Provisions

- · Contract terms range from 15-50 years.
- The CRCNV seeks to ensure that Nevada's hydropower is used to the greatest possible benefit to this state (NRS 538.161).
- CRCNV's contracts with utility providers require the low cost benefits of hydropower be passed on to their customers (NAC 538.540 (3)).
- Nevada Power Company must pass through to its residential class of customers, the economic benefits of a portion of its Hoover hydropower resource (NAC 538.540 (4)).
- · CRCNV passes through certain federal contract provisions.

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CRCNV Reallocation Provisions

- The CRCNV statutory regulations require a public, transparent process for reallocation (NAC 538.455).
- Contractor liable for payments until reallocation process complete.
- CRCNV also has temporary lay-off provisions; meaning unused hydropower can be provided to other contractors.

CRCNV Hydropower Benefits

- Hydropower is a highly desirable resource because it is clean, low-cost and renewable.
- · Cost-based rates:

Hoover

\$22.13 MWH

Parker-Davis

\$13.53 MWH

- Glen Canyon Dam \$29.42 MWH
- CRCNV provides input into federal operations, maintenance and budgets.
- CRCNV passes through other costs (ie. Admin, transmission, and habitat improvement costs).

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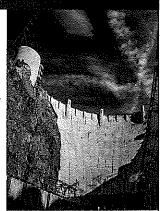
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Hoover Hydropower

- CRCNV's federal contract effective September, 2016 for deliveries beginning October 1, 2017 through September 30, 2067.
- CRCNV's allocation by Congressional Act. (Hoover Power Allocation Act of 2011 43 USC 619a)
- Hoover hydropower allocated by WAPA and CRCNV, all contracts with CRCNV.
- City of Boulder City allocated hydropower by Congressional Act.

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State Contractors beginning Oct 1, 2017

Full Requirements Contractors	Wholesale Utility Contractors	Retail End-U	er Contractors	
Basic Water Company	City of Boulder City	City of Henderson	College of Southern Nevada	
Lhoist	Lincoln County Power District No. 1	City of Las Vegas	Las Vegas Valley Water District	
Olin Chfor Alkali Products	Nevada Power Co. dba. NV Energy	City of Mesquite	Nevada Department o Administration	
TIMET	Overton Power District No 5	City of North Las Vegas	Nevada Department o Corrections	
Tronox	Valley Electric Association	Clark County School District	Nevada Department o Transportation	
		Clark County Water Reclamation	Southern Nevada Water Authority	
			University of Nevada - Las Vegas	

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Full Requirements Contractors

- NRS 538.161 and 538.181 allow for CRCNV to supply supplemental power.
- CRCNV contracts to provide scheduling and ancillary services.
 - Lhoist
 - TIMET
 - Tronox
 - Basic Water Company
 - Olin Chlor Alkali Products

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Wholesale Utility Contractors

- CRCNV contracts with southern Nevada utilities to provide hydropower.
- These utility companies may be affected by Energy Choice
 - City of Boulder City (also has own federal allocation by Congress)
 - Nevada Power Company dba NV Energy
 - Lincoln County Power District
 - Overton Power District
 - Valley Electric Association
- Right to renew per NRS 538.181(7), Hoover contract last renewal.

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Hydropower vs. Total Load Wholesale Utility Contractors

Total of all Utility Deliveries in FY 2016 24,104,426,000 kWh

 Hoover
 638,909,000
 kWh

 Parker-Davis
 62,021,000
 kWh

 Glen Canyon
 76,553,000
 kWh
 or 3%

 Total Hydropower
 777,483,000
 kWh
 or 3%

 Currently federal hydropower does NOT qualify as "renewable" under Nevada's Renewable Portfolio Standard (RPS).

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Summary

- Federal hydropower is a valuable, low-cost, renewable resource available to Nevada.
- The CRCNV, City of Boulder City and other Nevada entities hold long-term contracts with the federal Power Marketing Agencies for hydropower.
- The CRCNV allocates its hydropower within Nevada under long-term contracts and determines what is in the best interest of this State.

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Summary

- The Energy Choice Initiative has raised questions regarding:
 - Ability of Nevada to continue to benefit from low-cost, renewable federal hydropower.
 - Viability of these long-term hydropower contracts.
 - Policy of the CRCNV as to what is in the "best interest of the State".
 - Process on providing value to some CRCNV customers will change.
 - Legal questions.
 - CRCNV may need specific legislation.

 CRCNV's contract expires 2067. Some state allocations are 50 years and some are 15 years. CRCNV Allocations of Hoover Hydropower Annual Capacity Energy Contractor (kW) [kWb] Contractor 9.251.239 C5N 2,055,858 3,818,223 Uncoin Cty Power District No. 1 107.417.054 Nevada Power Company Overton Power District No. 5 71,783,386 16,976,897 12,073,907 12,397,834 Southern NV Water Authority State of NV, Admin State of NV, Corrections 2,181,842 State of NV, Transportatio 6 122 15

Hoover Dam Allocations

8/17/2017

