



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

***Prepared for the Governor's Committee on Energy Choice Workgroups
Generation, Transmission & Delivery
Energy Consumer & Investor Impacts***

August 17, 2017

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Executive Director
NREA



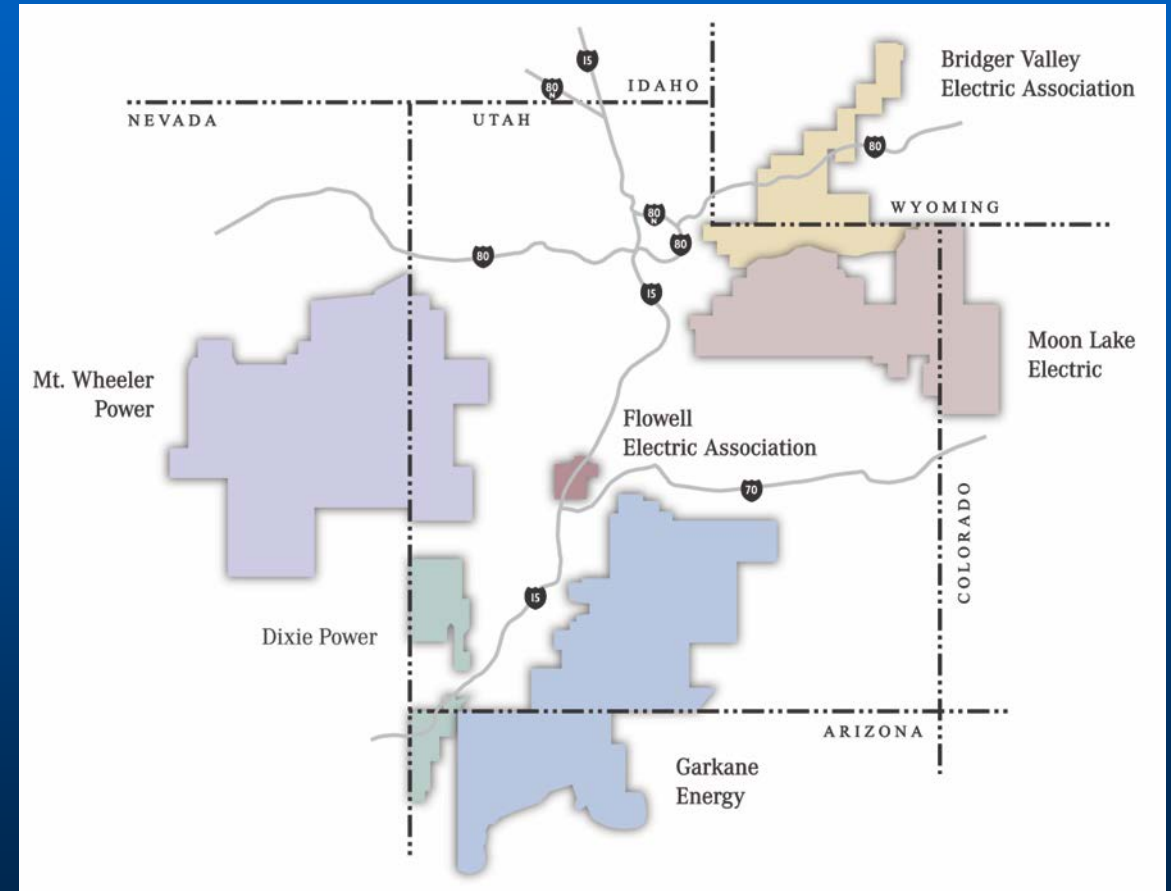
DESERET POWER
ELECTRIC COOPERATIVE

Nevada Energy Choice Initiative

Clay MacArthur, Vice President
August 2017

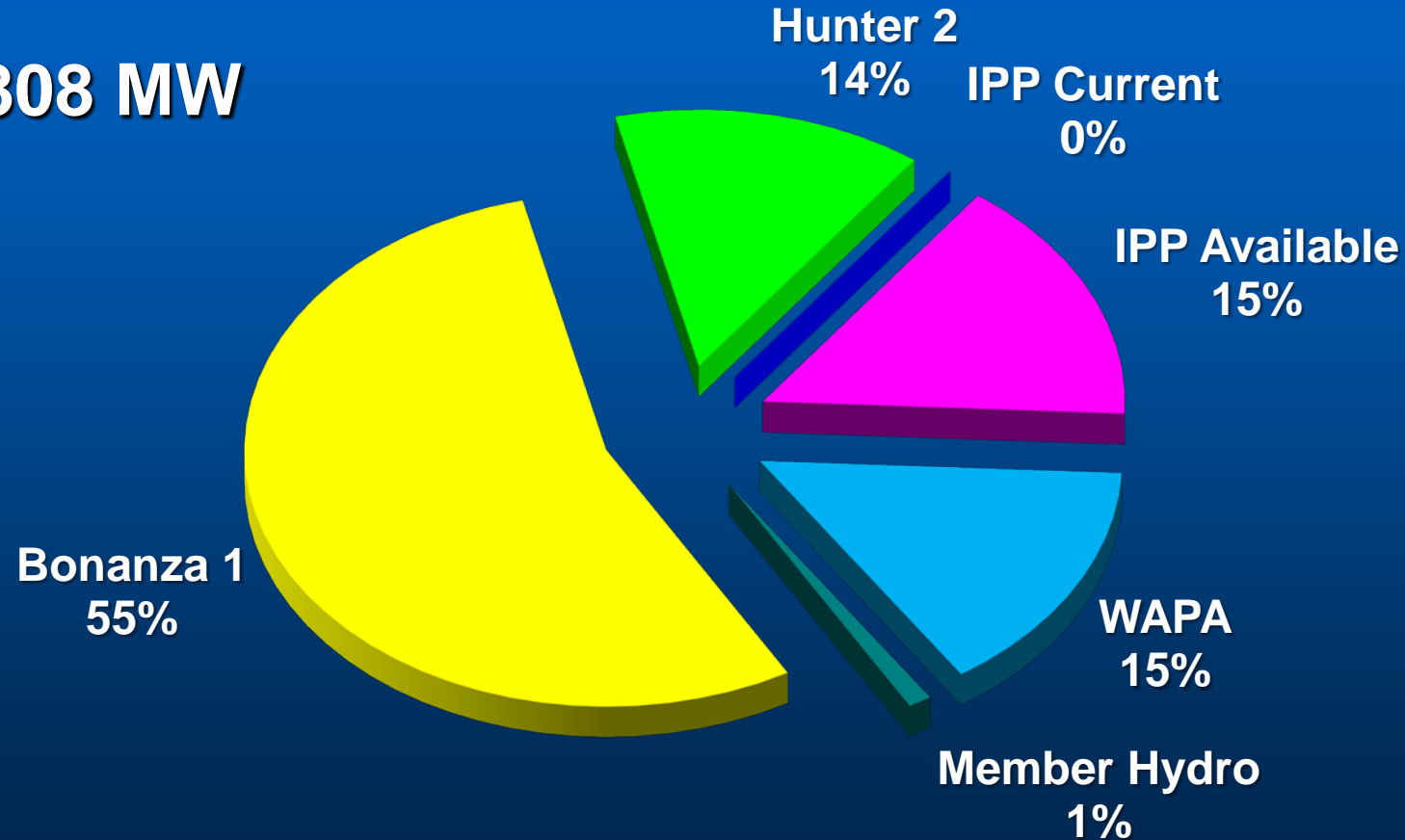
Deseret Power

- Established May 25, 1978 to provide power to six member coops
- Mt. Wheeler's "All Requirements" provider through December 1, 2077
- FERC Regulated



Deseret Power Resources

Total 808 MW



What is an Electric Cooperative?

- Grassroots organizations
- Democratically elected representatives
- Locally controlled
- Cooperative Principles?



Seven Cooperative Principles

- I. Voluntary and Open Membership**
- II. Democratic Member Control**
- III. Members' Economic Participation**
- IV. Autonomy and Independence**
- V. Education, Training and Information**
- VI. Cooperation Among Cooperatives**
- VII. Concern for Community**



Mt. Wheeler Power

- Incorporated in 1963
- 6,000+ Residential Members
- Serves Economically Sensitive Communities
- Lowest cost Residential provider with >500 Customers
- Along with Munis, not Regulated by PUCN



Comparison of Utility Structures

Structure	Ownership	Incentive	Financing
Investor Owned	Shareholders	For-profit	Investment
Municipal	Government	Non-profit	Taxes
Cooperative	Members	Non-profit	All Requirements Contract/Service Territory

900 Cooperatives exist in 47 States covering 75% of the United State's landmass



Mt. Wheeler Residential Rate

2015 Utility Bundled Retail Sales- Residential

(Data from forms EIA-861- schedules 4A & 4D and EIA-861S)

Entity	State	Ownership	Customers (Count)	Sales (Megawatthours)	Revenues (Thousands Dollars)	Average Price (cents/kWh)
SolarCity Corporation	NV	Behind the Meter	3,373	29,526	2,906.1	
Sunnova	NV	Behind the Meter	779	7,736	1,299.4	167.97
Nevada Power Co	NV	Investor Owned	781,871	9,245,833	1,218,322.0	13.18
Valley Electric Assn, Inc	NV	Cooperative	18,729	262,944	32,401.8	12.32
Sierra Pacific Power Co	NV	Investor Owned	287,725	2,315,402	273,387.0	11.81
Overton Power District No 5	NV	Political Subdivision	12,148	164,077	17,695.0	10.78
Wells Rural Electric Co	NV	Cooperative	4,331	50,045	4,997.0	9.99
Raft Rural Elec Coop Inc	NV	Cooperative	1,463	14,711	1,389.0	9.44
City of Boulder City - (NV)	NV	Municipal	6,866	93,691	7,699.7	8.22
Harney Electric Coop, Inc	NV	Cooperative	600	10,379	779.4	7.51
Mt Wheeler Power, Inc.	NV	Cooperative	5,032	72,279	5,089.1	7.04



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



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





End of Presentation



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.

Total Utility Plant Investment CY 2015	Total Annual Revenue CY 2015	Total Employees CY 2015	Total Annual Payroll CY 2015
\$293,852,330	\$184,353,076	266	\$12,345,678

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’.
 - 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.

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

NREA UTILITY MEMBERS

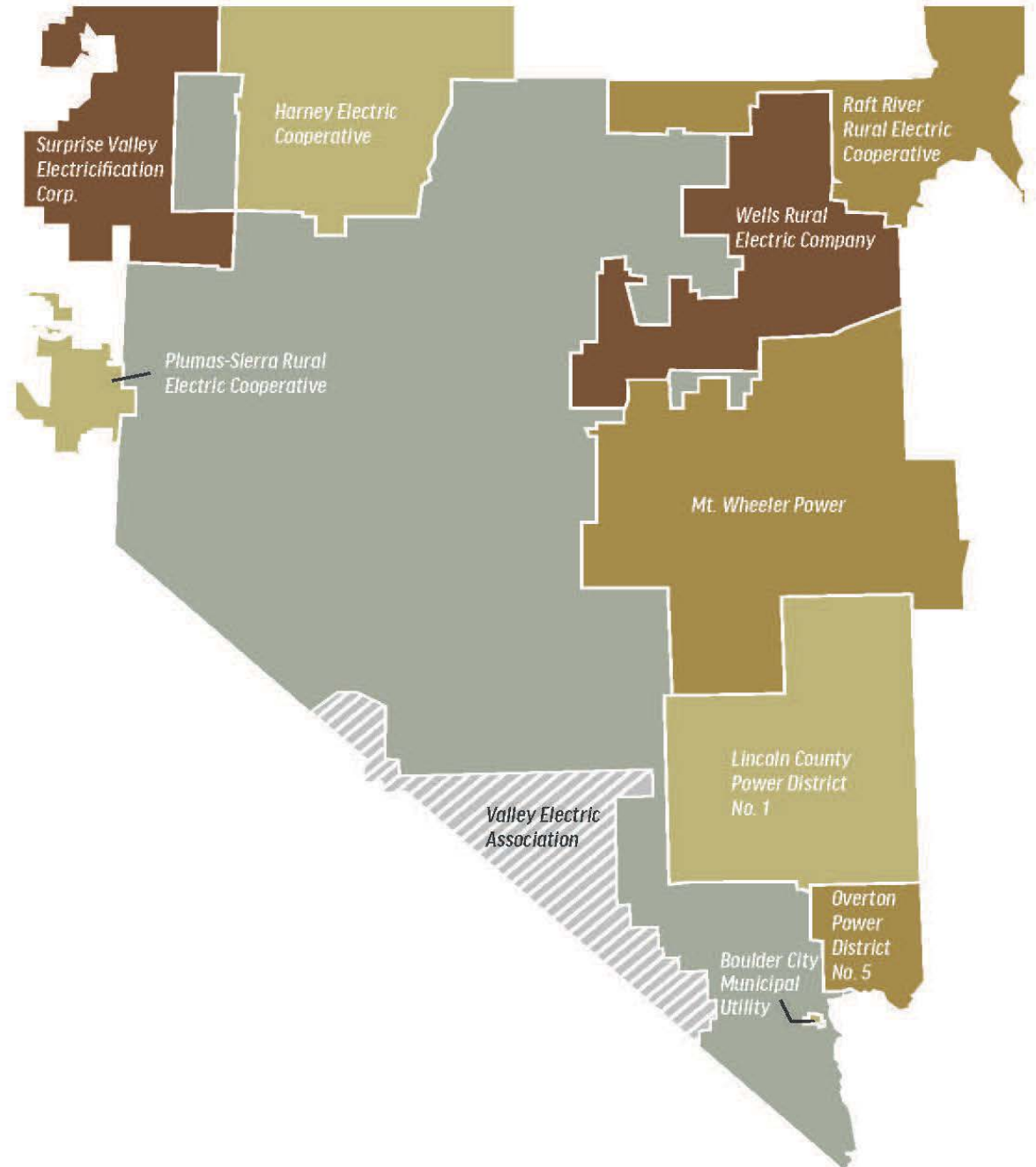


- Lincoln County Power District No. 1, *Pioche, NV*
- Mt. Wheeler Power, *Ely, NV*
- Wells Rural Electric Company, *Wells, NV*
- Overton Power District #5, *Overton, NV*
- Boulder City Electric Utility, *Boulder City, NV*
- Raft River Rural Electric, *Malta, ID*
- Harney Electric Cooperative, *Hines,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

LOCATION OF NEVADA'S RURAL ELECTRIC UTILITIES



NEVADA RURAL ELECTRIC
ASSOCIATION



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 (CY2015)
- **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



Estimated Economic Impact of Energy Choice Initiative			
Stranded Investment			
Description	Annual Cost	Term in Years	Extended Cost
Bonneville Power Administration Wholesale Power Supply Contract	\$29,707,392	11	\$326,781,312
Northwest Energy Management Services	\$1,440,000		
Trout Creek Hydroelectric Generation Plant	\$33,583		
Transmission ₂	\$199,248	11	\$2,191,728
Obsolete meters ₃			
Stranded Investment Subtotal	\$31,380,223		\$328,973,040
Contractual Obligations			
Long-term debt	\$493,266		\$14,011,061
Post-retirement benefits	\$2,814,088		
International Brotherhood of Electrical Workers Local 1240? Labor Contract			
Member Equity (Allocated as Capital Credits)	\$600,000		\$18,871,720
Contractual Obligation Subtotal	\$3,414,088		\$32,882,781
			\$361,855,821

Overton Power District #5



Unfunded Portion of Contracts

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

	<u>WAPA-BCP</u>	<u>Market Contract</u>	<u>WAPA-SLCAIP</u>	<u>Total</u>
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	<u>\$ 97,361,341.22</u>
				\$401,883,883.88

Mt Wheeler Power



Stranded Investment			
Description	Annual Cost	Term in Years	Extended Cost
Snake Valley Hydro Generation	\$0		
NITSA Transmission Contract (3) not including ancillary services	\$1,113,000	17	\$ 18,921,000.00
Obsolete meters(4)			
Undepreciated Plant Assets owned by members			\$ 37,668,709.00
Stranded Investment Subtotal	\$1,113,000		\$ 56,589,709.00
Contractual Obligations			
Deseret Power Wholesale Contract (through 2080)	\$9,100,000	63	\$ 573,300,000.00
IPP Contract Wholesale Power Contract (Through 2077) Current Debt obligation	\$0		\$ 20,707,420.00
Western Area Power Administration Contract (Through 2025) (2)	\$889,785	9	\$ 8,008,065.00
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 (Allocated as Capital Credits)	\$825,000		\$ 27,339,358.41
USDA REDLG Community Facilities Obligations (WP County Judicial Center)			<u>\$ 1,000,000.00</u>
Contractual Obligation Subtotal	\$12,939,785		\$ 645,604,843.41

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

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



NEVADA RURAL ELECTRIC
ASSOCIATION

- **Estimated Economic Impact of Energy Choice Initiative**

Stranded Investment:

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

Other Contractual Obligations

- Long-term debt (Transmission serving Nevada) \$16,460,000

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

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



NEVADA RURAL ELECTRIC
ASSOCIATION

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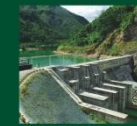
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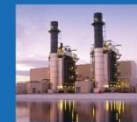
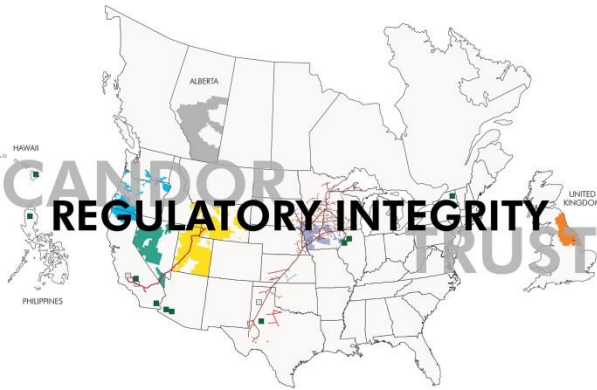
CUSTOMER SERVICE



EMPLOYEE COMMITMENT



ENVIRONMENTAL RESPECT



OPERATIONAL EXCELLENCE



BERKSHIRE FINANCIAL STRENGTH OWNERSHIP

Impacts of Energy Choice on Long Term Agreements

Committee on Energy Choice's Technical Working Group on Energy Consumer & Investor Impact: Divesting Assets & Investments

October 17, 2017



Objectives



- Present to the working group a view of the contractual rights available to NV Energy to divest of long term contracts in light of potential Energy Choice legislation.
- NV Energy's expectation is that any Energy Choice legislation should allow NV Energy to honor its contractual commitments and avoid creating circumstances that would damage the reputation of the State of Nevada or NV Energy or harm its counterparties.

Agenda



- Long term agreements with terms beyond 2022:
 - Long term service agreements (3)
 - Power purchase agreements (46) (NV Energy is the seller for one)
 - Gas transportation agreements with pipelines (4 pipeline companies)
- Potential Implications of energy choice on long term agreements:
 - Potential obligation to divest
 - Potential inability of NV Energy to perform obligations under the agreements
 - If unable to perform its obligations NV Energy could be subject to claims for default for failure to perform and damages
- NV Energy's potential options for divesting of contracts are:
 - Terminate agreements
 - Assign agreements

Energy Choice Impacts on Long-Term Agreements



- The passage of Energy Choice that results in a transmission and distribution only utility would require the termination or assignment of long term agreements, under which NV Energy cannot perform.
- NV Energy may also incur transaction costs for the termination or assignment of the long term agreements or any payments that are required to facilitate termination or assignment.
- NV Energy would incur stranded costs equal to: a termination payment; or upon assignment the remaining value of the agreement less any compensation received, plus any transactions costs.

Long-Term Service Agreements



- There are two long term service agreements which may be terminated for a fee.
- The fee for termination is either a percentage of the remaining value of the agreement or the entire fee depending on the agreement.
- One long-term service agreement does not provide for early termination.
- The specific terms of these agreements cannot be discussed in this venue as they are subject to confidentiality agreements.

Power Purchase Agreements



<u>Facility Name</u>	<u>Counterparty</u>	<u>Facility Name</u>	<u>Counterparty</u>
Mountain View	NextEra	Nevada Solar One (SPPC)	Acciona
New Lahontan	TCID	NGP Blue Mountain	AltaRock
Nellis I	TerraForm	Silver State	Enbridge
SunPower	LVVWD	USG San Emidio	US Geothermal
Nevada CoGen #1	Northern Star	WM Renewable	WM Renewable Energy
Nevada CoGen #2	Rockland Capital	Switch Station 2 (Playa-NPC)	EDF Renewable
ACE Searchlight	DE Shaw	Switch Station 2 (Playa-SPPC)	EDF Renewable
RV Apex	Southern Company	Liberty (CalPeco)	Liberty Utilities
Colorado River Commission-Hoover	Bureau of Reclamation	Kingston	Young Brothers
FRV Spectrum	Southern Company	Mill Creek	Van Norman Ranches
Ft. Churchill	Apple	RO Ranch	BTAZ Nevada
Hooper	Hooper	Salt Wells	Enel
Apex Landfill	Republic Services	Stillwater	Enel
Spring Valley	Pattern	TMWA Fleish	TMWA
Tonopah Crescent Dunes	SolarReserve	TMWA Verdi	TMWA
TMWRF	City of Sparks	TMWA Washoe	TMWA
Techren 1	174 Power Global (Hanwha)	Desert Peak 2	Ormat
Techren 2	174 Power Global (Hanwha)	Galena 2	Ormat
Switch Station 1	EDF Renewable	Jersey Valley	Ormat
Beowawe	Terra-Gen	McGinness Hills	Ormat
Boulder Solar I	Southern Company	Tuscarora	Ormat
Boulder Solar II	AEP Renewables	Burdette	Ormat
Nevada Solar One (NPC)	Acciona	Galena 3	Ormat

No Contractual Right to Terminate Power Purchase Agreements



- None of the power purchase agreements have a provision permitting early termination.
- This is principally due to the fact that independent power producers finance power projects over long terms, which means financial institutions would not be interested in financing contracts with provisions which put at risk the long-term revenue stream under the power purchase agreement.
- These agreements may still be able to be terminated, but a counterparty would have to agree to early termination and would likely do so only with significant financial consideration being made to the counterparty.

Power Purchase Agreement Assignment Provisions



- Assignment is treated in three ways in NV Energy power purchase agreements:
 - Silent—a few power purchase arrangements for small facilities have no assignment provision, e.g. qualifying facility agreements. These contracts may not continue after Energy Choice, and may be assignable under Nevada law.
 - No assignment without consent of the counterparty.
 - No assignment without consent, but with certain limited exceptions when assignment may be made by NV Energy without counterparty consent.

No Assignment Without Consent



- Typical provisions that require consent for assignment:
 - Mutual Prohibition. Except as stated above, neither this Agreement nor any of the rights, interests, or obligations hereunder shall be assigned by either Party, including by operation of Law, without the prior written consent of the other Party, which consent shall not be unreasonably withheld, conditioned or delayed. Any assignment of this Agreement in violation of the foregoing shall be, at the option of the non-assigning Party, void.
 - Assignment. Subject to Section 25 below, neither Party shall voluntarily assign this Agreement without the prior written consent of the other Party. Such consent shall not be withheld provided assignee has the demonstrated capabilities to undertake and assume all of the obligations under this Agreement. Any assignment made without first obtaining such consent will not serve to relieve the assignor of any of its obligations under this Agreement, nor shall the non-assigning Party have any obligations or liabilities of any kind to the assignee under such an assignment.

Agreements May Be Assigned Without Consent to a Utility



- Typical provision for assignment by consent with exceptions:
 - Buyer Assignment. Buyer may assign this Agreement or assign or delegate its rights and obligations under this Agreement, in whole or in part, without Supplier's consent (but with notice to Supplier), if such assignment is made to: (a) Sierra Pacific Power Company or an Affiliate of Buyer (provided, that, at the time of any such assignment, Sierra Pacific Power Company or the assignee which is an Affiliate of Buyer (i) is a public utility holding a certificate of public convenience and necessity granted by the PUCN pursuant to NRS Chapter 704 and (ii) does not have a lower Credit Rating than Buyer had on the Effective Date); (b) where such assignment does not occur by operation of law, any successor to Buyer provided such successor (i) is a public utility holding a certificate of public convenience and necessity granted by the PUCN pursuant to NRS Chapter 704 and (ii) does not have a lower Credit Rating than Buyer had on the Effective Date; or (c) a legally authorized governmental or quasigovernmental agency charged with providing retail electric service in Nevada (provided, that, at the time of any such assignment, such assignee does not have a lower Credit Rating than Buyer had on the Effective Date).

Agreements May Be Assigned Without Consent to an Entity With a Minimum Credit Rating



- Typical provision for assignment with consent with exception for a counterparty with a minimum credit rating:
 - 23.1.2 Buyer also may assign this Agreement, in whole or in part, without Supplier's consent, to a Person whose Credit Rating, as published by either Relevant Rating Agency, is equal or superior to the Minimum Credit Rating as of the time of assignment.

Gas Transportation & Storage Contracts



Pipeline	Number of Gas Transportation or Storage Agreements
TransCanada Foothills System	1
TransCanada Gas Transmission Northwest	3
Northwest Pipeline	1 Storage Agreement
Paiute Pipeline	None at this time past 2022, but will be renewed for LDC
TransCanada Tuscarora Gas Transmission	1
Kern River Gas Transmission	7
Southwest Gas	1

Gas Transportation & Storage Contracts



- NV Energy's gas transportation and storage agreements are governed by contract and the pipeline's tariff.
- The gas transportation contracts or tariffs do not have early termination provisions.
- The gas transportation tariffs have similar tariff provisions which require consent to assignment, which consent cannot be unreasonably withheld.
- Gas can be released through capacity releases, but NV Energy would be responsible for any cost differential.
- If NV Energy continues to operate its local gas distribution company some of the gas transportation and storage agreements will need to be retained to meet those needs.

Other Agreements & Timing for Restructuring



- NV Energy enters into other agreements such as confidentiality agreements, natural gas supply agreements, which have shorter terms and are not included in this presentation as Energy Choice implementation timing is not now known.
- Once Energy Choice timing is known, those contracts will need to be analyzed to determine whether any action is required in light of Energy Choice.

Summary



- Termination:
 - Two long term service agreements can be terminated for convenience with a fee.
 - The power purchase agreements and natural gas transportation and storage agreements do not provide for a termination for convenience.
 - It may be possible, but unlikely, to buyout and terminate the agreements for a fee.
- Assignment:
 - Assignment only with consent of the counterparties.
 - Assignment without consent to a utility company providing retail electric service in Nevada. A utility company in Nevada today is an entity that holds a certificate of public convenience and necessity and is regulated by the PUCN pursuant to NRS 703 and 704. A retail energy provider in an Energy Choice marketplace would likely not qualify as a utility under the law as presently constituted.
 - Assignment to a counterparty that meets a minimum credit rating.
 - Four power purchase agreements are silent on assignment.
 - Assignments may require payments to compensate counterparties for a change in risk profile of their counterparty or lower market prices than remaining contract value.
- Important:

Any Energy Choice legislation should allow NV Energy to honor its contractual commitments and avoid creating circumstances that would damage the reputation of the State of Nevada or NV Energy or harm NV Energy or its counterparties.

Colorado River Commission of Nevada (CRCNV)

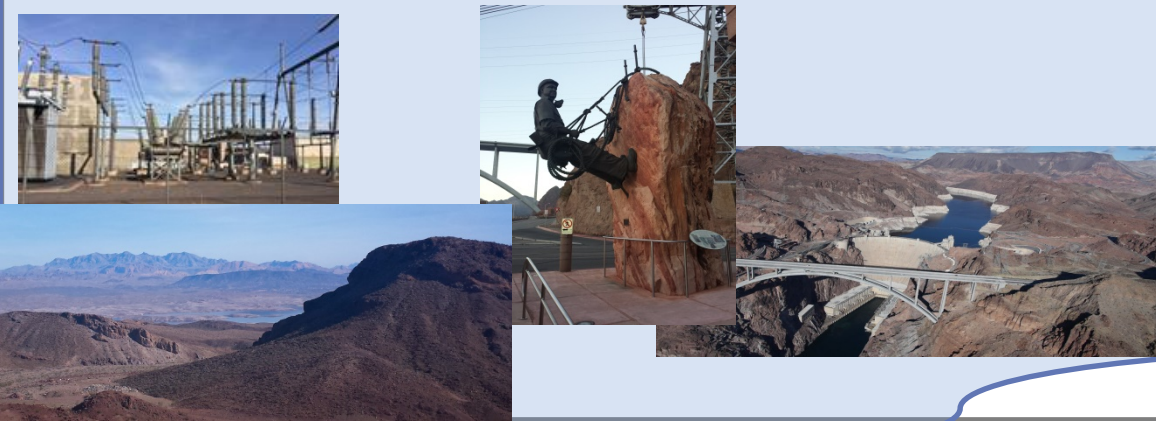
Presentation to the Committee on Energy Choice

Technical Working Group on Generation,
Transmission and Delivery
&

Technical Working Group on Energy Consumer
& Investor Economic Impact

Jayne Harkins, P.E.
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August 17, 2017



Presentation Outline

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

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 acre-feet.

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.

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.

CRCNV Overview

CRCNV owns, operates and maintains power and communication facilities located in and around Las Vegas, Henderson and Boulder City.

Responsible for protecting the rights and interests to Nevada's entitlement of water made available from the Colorado River.

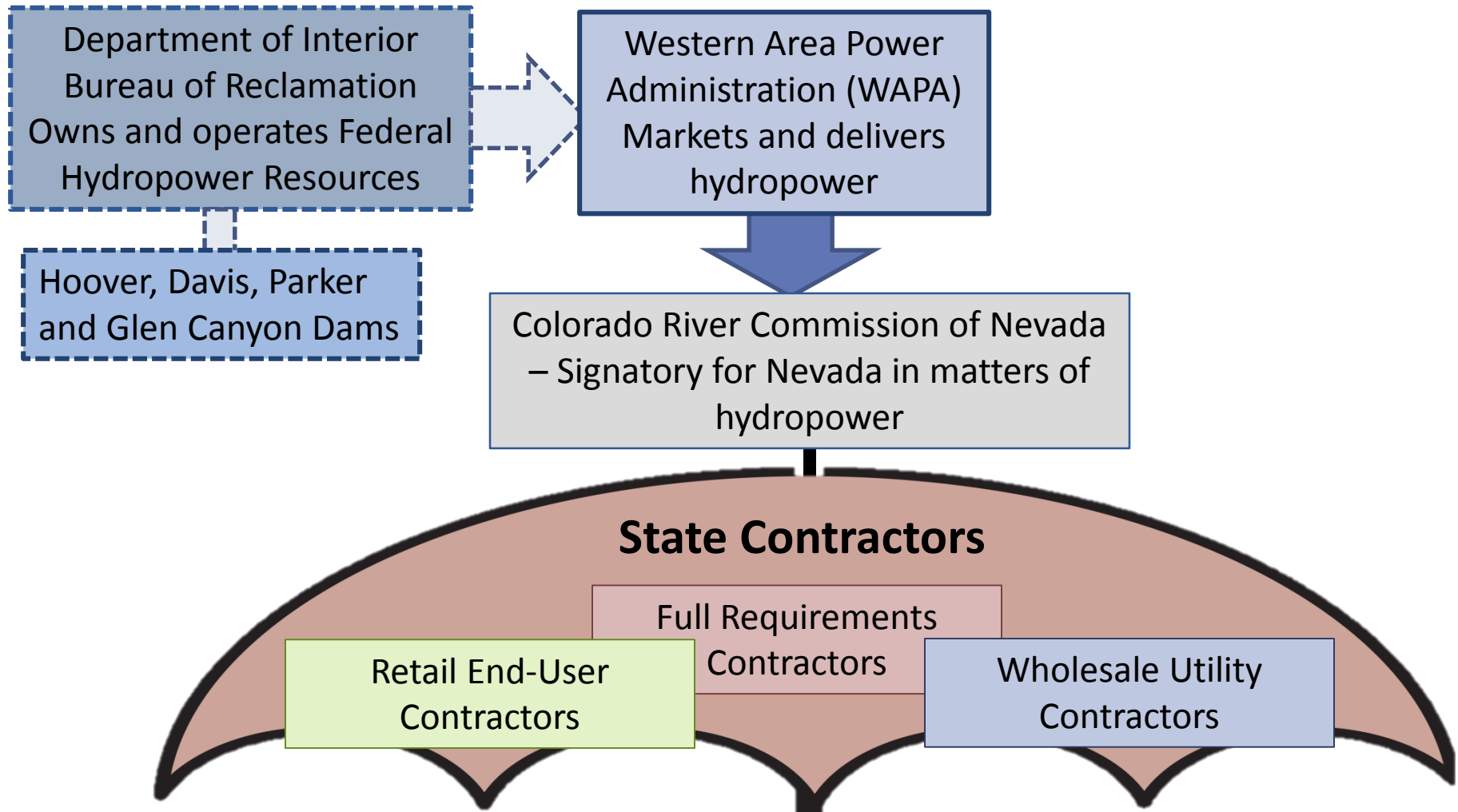
Purchases hydropower from federal hydroelectric facilities on the Colorado River located at Hoover, Davis, Parker and Glen Canyon dams and allocates the hydropower for the greatest benefit to Nevada. CRCNV also purchases non-hydropower resources for certain customers.

Strives to protect the water quality, and the aquatic and terrestrial integrity of the Colorado River Basin while ensuring the continued operation of the Colorado River for the authorized beneficial purposes.

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

Federal Hydropower Contract Structure



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

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.

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).

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.



State Contractors beginning Oct 1, 2017

Full Requirements Contractors	Wholesale Utility Contractors	Retail End-User 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 Chlor Alkali Products	Nevada Power Co. dba. NV Energy	City of Mesquite	Nevada Department of Administration
TIMET	Overton Power District No 5	City of North Las Vegas	Nevada Department of Corrections
Tronox	Valley Electric Association	Clark County School District	Nevada Department of Transportation
		Clark County Water Reclamation	Southern Nevada Water Authority
			University of Nevada – Las Vegas

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

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.

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
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Parker-Davis	62,021,000	kWh
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Glen Canyon	<u>76,553,000</u>	kWh
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Total Hydropower 777,483,000 kWh Or 3%

- Currently federal hydropower does NOT qualify as “renewable” under Nevada’s Renewable Portfolio Standard (RPS).

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.

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.

Hoover Dam Allocations

- CRCNV's contract expires 2067.
- Some state allocations are 50 years and some are 15 years.

CRCNV Allocations of Hoover Hydropower

<u>Contractor</u>	<u>Capacity</u> (kW)	<u>Annual</u> <u>Energy</u> (kWh)	<u>Contractor</u>	<u>Capacity</u> (kW)	<u>Annual</u> <u>Energy</u> (kWh)
Basic Water Co.	4,875	9,251,239	CSN	282	615,019
Lhoist	386	2,055,858	LVVWD	7,049	19,389,730
Olin	1,750	3,818,223	Lincoln Cty Power District No. 1	28,215	101,245,012
Timet	21,609	107,417,054	Nevada Power Company	237,558	497,725,963
Tronox	17,824	71,783,386	Overton Power District No. 5	19,707	46,438,260
City of Boulder City	8,584	16,976,897	Southern NV Water Authority	17,146	79,349,211
City of Henderson	3,695	12,073,907	State of NV, Admin	109	238,566
City of Las Vegas	3,846	12,397,834	State of NV, Corrections	282	615,019
City of Mesquite	1,000	2,181,842	State of NV, Transportation	116	253,887
City of N. Las Vegas	1,765	3,851,805	Valley Electric Association Inc.	17,673	41,209,635
CC School District	3,007	6,566,044	UNLV	2,806	6,122,153
CCWRD	3,469	11,579,266	CRCNV Total	71,810 kW	259,953,355 kWh

Glen Canyon Dam Allocations

- CRCNV's contract and CRCNV's customers contracts expire September 30, 2024.

CRCNV Allocations of Glen Canyon Dam Hydropower

<u>Contractor</u>	<u>Capacity (kW)</u>	<u>Annual Energy (kWh)</u>
City of Boulder City	7,279	21,570,508
Overton Power District No. 5	8,256	24,464,888
Valley Electric Assoc.	11,879	35,201,567
CRCNV Total	27,414 kW	81,236,963 kWh

Parker – Davis Project Allocation

- CRCNV's contract and CRCNV's customer contracts expire September 30, 2028.

CRCNV Allocations of Parker-Davis Hydropower

<u>Contractor</u>	<u>Capacity (kW)</u>	<u>Annual Energy (kWh)</u>
Basic Water Company	3,001	6,039,944
Lhoist	237	1,342,210
Timet	13,304	70,130,458
Tronox	17,581	77,848,163
Southern Nevada Water Authority	9,456	46,641,788
Overton Power District No. 5	4,497	21,923,409
Valley Electric Association	8,484	40,097,644
CRCNV Total	56,560kW	264,023,616 kWh

Parker Dam – “Run of River”

Questions?



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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