



# Navajo Generating Station and Kayenta Mine

## *A Navajo Solution*

### PROPOSAL

**Acquisition.** NTEC acquires the Navajo Generating Station (NGS) and Kayenta Mine (KM) to create a vertically-integrated power project operating two of the three units for a total of 1500 MW of production.

- Assets acquired at basically zero cost.
- NTEC accepts all past and future liabilities
- Current owners to transfer NGS and available KM decommissioning and reclamation costs into escrow.
- BOR's 24.3% interest in NGS will be acquired by NTEC, but BOR to retain priority option to buy power for benefit of CAP.

**This allows BOR to continue to meet its congressionally mandated obligation of ensuring power is available for CAP under the Colorado River Basin Act of 1968**

### WHY IT WORKS

- **NTEC is different than any other buyer** and is exempt from paying Federal and State Income taxes.
- NTEC's ownership of the mine allows for the sale of fuel at cost, reducing the price of fuel by \$20/ton.
- NTEC is a small Navajo-owned company with little overhead.
- The model is **PROVEN**. NTEC has proven that it can operate a mine, service a power plant, and sell energy into this competitive market.

### TIMELINE

- February 2019 – BOR “re-start” NEPA
- March 2019 - Complete asset purchase agreement for NGS & KM
- September 2019 - Close on acquisition
- Fall 2019 -NEPA Public Notice
- December 22, 2019 – NGS will idle until FEIS/ROD is issued
- 1<sup>st</sup>Q/2<sup>nd</sup> Q 2020—FEIS/ROD issued and NGS operations commence

### THE ASK

- 1) BOR commit to one-year NEPA timeline per Exec. Order 3355 re: streamlining NEPA
- 2) Restart Draft EIS from 2016 and supplement/update as needed
  - No new scoping or Federal Register Notice is required
- 3) BOR and NTEC enter into an agreement to ensure power availability for CAP to comply with Colorado River Basin Act of 1968 and Arizona Water Settlements Act of 2004.
- 4) Provide support in order to protect over 800 Navajo jobs and over \$2.6 billion in economic contribution to the Navajo Nation, Hopi Tribe and N. Arizona and New Mexico Region.

**NTEC is positioned to return NGS and KM to profitability while retaining jobs and revenue for the Navajo Nation and Hopi Tribes. The vertically integrated structure significantly reduces overhead and total costs.**



# NTEC Strategy for the Acquisition & Operation of the Navajo Generating Station & the Kayenta Mine

*A historic opportunity for the Navajo  
Nation to fully establish control of its  
energy resources*



# Navajo Transitional Energy Company



**Formed with care and foresight by the Navajo Nation Council to establish Navajo ownership and control of Navajo natural resources**

- **Proven** record of success acquiring and then turning around the operations of the Navajo mine. Now a profitable and award winning mine setting the standard for Navajo compliance with environmental obligations and mine reclamation requirements.
- **Proven** record of success acquiring an ownership interest in the Four Corners Power Plant and selling energy into the regional power markets.
- **Proven** record of financial success:
  - \$183M in taxes and royalties paid to the Nation since acquisition of the mine, \$38M in 2018 alone.
  - Additional \$3M dividend paid into the Nation General Fund in 2018.

# NGS – Kayenta Mine Acquisition



**NTEC is uniquely positioned to return NGS and Kayenta to profitability and ensure ongoing financial viability**

- NTEC will not replicate the current operating model of NGS which is burdened by an independent fuel source (Kayenta) operating as a separate profit center. The simple but key distinction is that NTEC will acquire **both** NGS and Kayenta and operate them as a single, vertically integrated business.
- This ensures the ability to operate profitably for the long term:
  - The coal transfer price from the mine to the plant will be at cost **without profit.**
  - As a consolidated entity, duplicative overhead expense is eliminated.
  - Consequently, total costs for the plant are significantly reduced.
  - NGS can sell power at lower prices and still be profitable and competitive in the markets.
  - As a tribal entity, NTEC is exempt from state & federal income tax.

# Vertically Integrated Operating Model



## Proven model benchmarked against existing, successful facilities

- NTEC's Contract Miner at the Navajo Mine operates four mines that are vertically integrated with a power plant. All four of these operations are:
  - Low cost power producers that compete well with natural gas.
- Blackstone's Twin Oaks Power Plant and Willow Creek Mine is also a vertically integrated plant & mine located in Texas. Within its dispatch area (ERCOT), Twin Oaks is the first plant dispatched after renewables and co/gen – ahead of any gas plants.
  - Twin Oaks' 2018 capacity factor was 88.63%.
  - The variable operating & fuel costs at Twin Oaks / Willow Creek is in line with NTEC's NGS / Kayenta model (SNL Energy Data).
  - Twin Oaks is also dispatched ahead of both TX nuclear facilities.
- NTEC is projecting the cost of a vertically integrated mine & power plant to be \$28.05/Mwh (2020\$). For the same time period, SRP is projecting its cost at NGS to be \$41.72/Mwh.<sup>1</sup>

1 - (NGS Economic Assumptions, NTUA et al, February 24, 2017)

# Projected Generation Costs



	NTEC Vertically Integrated <u>\$/Mwh</u>	SRP 2017 Estimate <u>\$/Mwh</u>
<b>Plant Operating &amp; Maintenance Expenses</b>		
Regular O & M Non-Fuel Costs	\$11.00	\$14.07
Major Repairs	\$2.06	\$2.64
Plant G & A	\$0.67	\$4.02
Plant Operator Fees	\$0.84	
<u>Plant DDA</u>	<u>\$0.50</u>	<u>\$0.56</u>
<b>Subtotal Plant Expenses</b>	<b><u>\$15.06</u></b>	<b><u>\$21.29</u></b>
<b>Mine Operating &amp; Maintenance Expenses</b>		
Mine Production Costs	\$7.20	
Outside Services / Field Operating	\$0.68	
Mine G & A	\$0.74	
Contract Miner Fees	\$0.56	
Royalties	\$1.63	
<u>Mine DDA</u>	<u>\$0.64</u>	
<b>Subtotal Mine Expenses</b>	<b><u>\$11.46</u></b>	<b><u>\$20.43</u></b>
<b>Pre-Production &amp; Closing Costs</b>		
Amortization of Pre-Production Costs	\$0.31	
<u>Mine ARO</u>	<u>\$1.22</u>	
<b>Subtotal Pre-Production &amp; Closing</b>	<b><u>\$1.53</u></b>	<b><u>\$0.00</u></b>
<b>Total Generation Cost</b>	<b>\$28.05</b>	<b>\$41.72</b>

# Power Market Overview



- NTEC has been in contact with over 14 potential purchasers of NGS power. These include:
  - All current owners of NGS, and
  - Other investor-owned utilities, municipal utilities and electric power cooperatives, as well as private purchasers of power in the region.
- NTEC is participating in the Central Arizona Project's RFP for power for delivery in Q4 2020.
- Discussions to date indicate sufficient demand for power in the region starting in 2020/2021 to meet the needs of 2-unit operation at NGS.
- NTEC is developing detailed power sale agreement terms that will be attractive to prospective counterparties and consistent with budget requirements of NGS.

# Market Price Projections

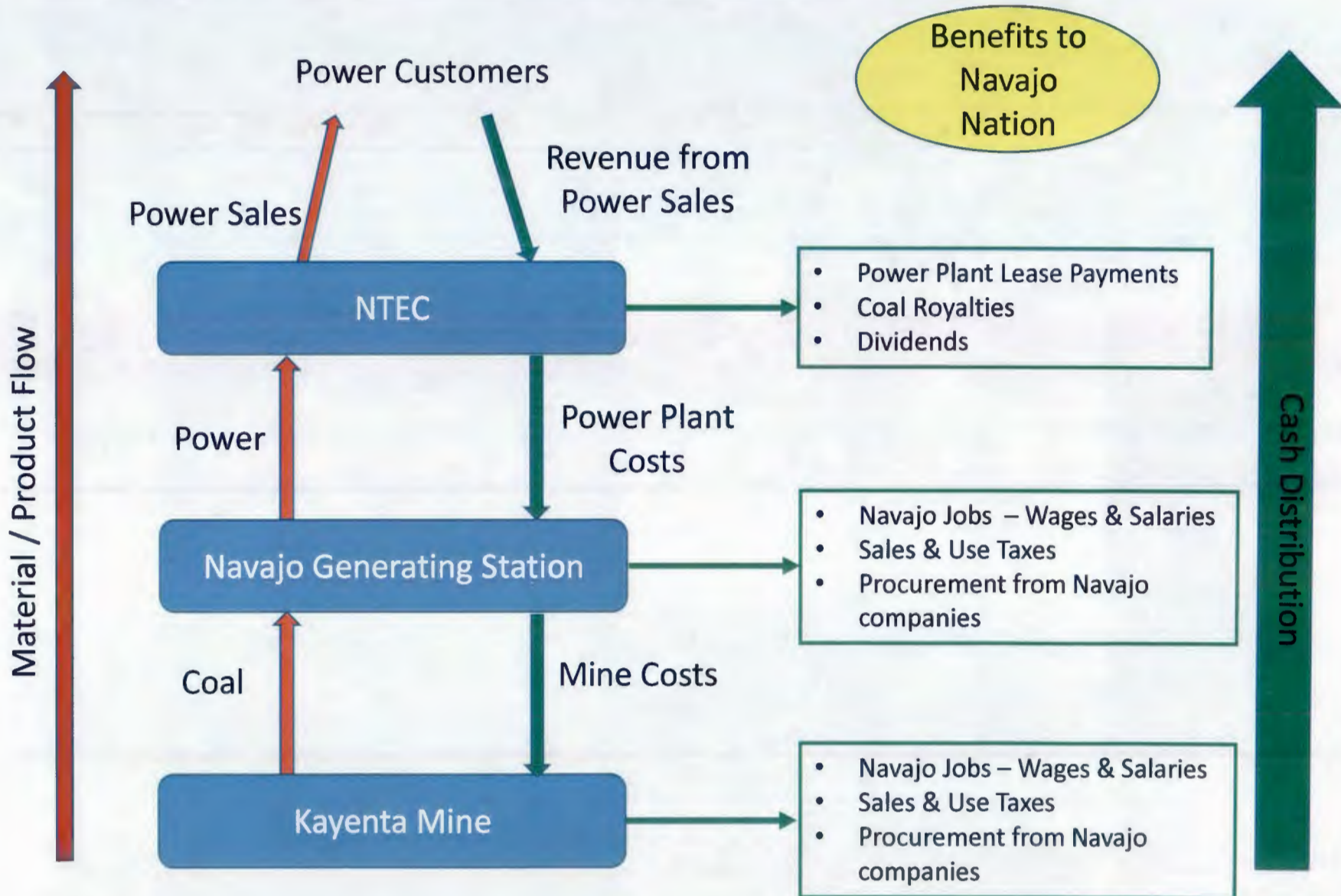


- Market prices for power in the NGS region over the 2020 – 2027 period.





# Tribal Model - Vertically Integrated Company



# Research Opportunities



## **One Idled turbine can be used as a test bed facility**

- Current plans call for retiring one of the three units at NGS. Unit 3 and its separate control room and other facilities could offer a unique opportunity to enhance and improve coal-fired power generation, as well as non-fuel uses of coal.
- The retired unit at NGS could easily be maintained and operated on a limited basis. Such a facility is difficult to find for projects that have outgrown the laboratory and bench scale world; but are not quite ready for full-scale commercial deployment. A full-sized commercial plant available for testing new and developing technologies would help fill this research, development, and deployment need.
- Possible research could involve:
  - Improving plant heat rate (efficiency)
  - CO<sub>2</sub> Capture
  - Water use and chemistry
  - New sensor technologies
  - Test new alloys and materials
  - Validation of heat and flow modeling

# Research Opportunities



## Kayenta high quality coal also provides excellent opportunities for research

- **Activated Carbon** – porous carbon particles used to remove contaminants from water, chemicals, and air.
- **Coal Pitch** – liquefied coal that is used in a number of processes and which is currently not made in the US (most comes from China).
- **Electro-grade Coke** – green and needle coke used to make electrodes for metal smelters (electric arc furnace) (aluminum, iron, copper, etc.)
- **Carbon Fibers** – carbon fibers are currently made from petroleum. Some processes are being developed to make fibers from coal, with superior characteristics.
- **Carbon Foam** – a foam made from coal that is light weight, heat proof, and crush resistant. Could be basis for new products from car bumpers to true fireproof wall board.
- **Direct Soil Amendments** – used either directly or with some chemical processing, coal can be used in many areas to increase crop yields, improve water use, retain fertilizers, etc.
- **Humate Extraction for Agriculture** – Humic and fulvic acids are organic acids that can be extracted from coal and used to improve agricultural crops.
- **Rare Earth Element (REE) Extraction** – REE occur in coal and there is a potential that they can be extracted, economically, from coal.
- **Coal-to-Liquids** (without gasification) – several technologies are being developed to create valuable liquids (fuels and chemicals) from coal without the expense and issues of gasification.

# Key Components to the Acquisition



- NTEC will acquire NGS in return for assuming all current and future liabilities associated with the facility and eventual decommissioning. The assumption of these liabilities is a commonplace component of any acquisition of this type.
- All benefits of the existing agreement between the Navajo Nation and the NGS participants are preserved in the proposed acquisition. These include:
  - The current decommissioning costs (approx. \$150M) will be placed into permanent interest bearing escrow account until eventual closing of the plant;
  - Payments for transmission rights of way and lease payments by the NGS participants will continue to be paid to the Nation (approx. \$110M);
  - Cost savings of \$18M related to the preservation of certain facilities on the property will be paid to the Nation; and
  - Water rights dedicated to the operations of the plant (approx. 50K AFY) are preserved.

# Benefits to the Navajo Nation



- **\$2.6 Billion** direct contribution to the regional economy over 10 yrs (Wages, services, purchasing):
  - 650 jobs at NGS and Kayenta
  - \$950M in wages and salaries
  - \$1.0B in materials and supplies
  - 80 vendors and small businesses continue to provide \$300M in services
- An additional estimated **\$260M** in royalty and sales tax payments to the Nation itself.
- All benefits that were previously negotiated by the Nation are preserved.

# Proposed Council Action



- NTEC does not require specific Council action at this time.
- However, NTEC would certainly appreciate Council's continued support of NTEC's acquisition of NGS and Kayenta.
- NTEC does not advocate for, nor does it support, the current demand from the participants that the Nation itself guarantee and indemnify the NGS participants for all potential NTEC obligations in the event of a sale.
- An amendment to the Extension Lease will be required as part of the final transaction between NTEC and SRP.
- Any acquisition should be treated as an arm's length commercial transaction between NTEC and the NGS participants.