THE SORE CANYON PSH PROJECT

GRAVITY STORAGE LLC, Ver. 20240918

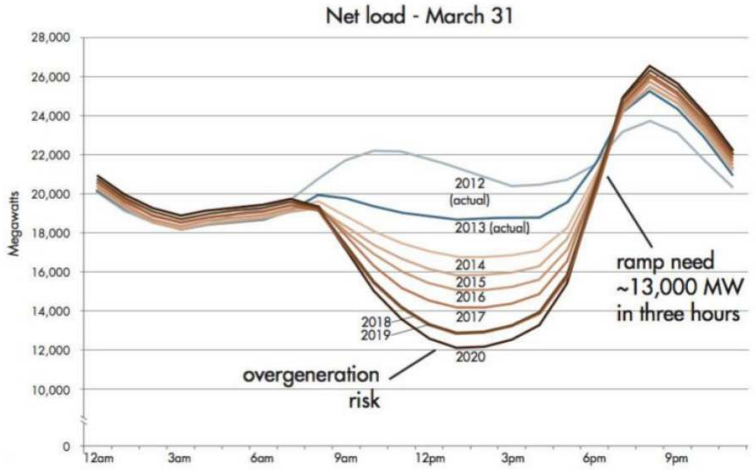
GS LLC

CAUTIONARY STATEMENT

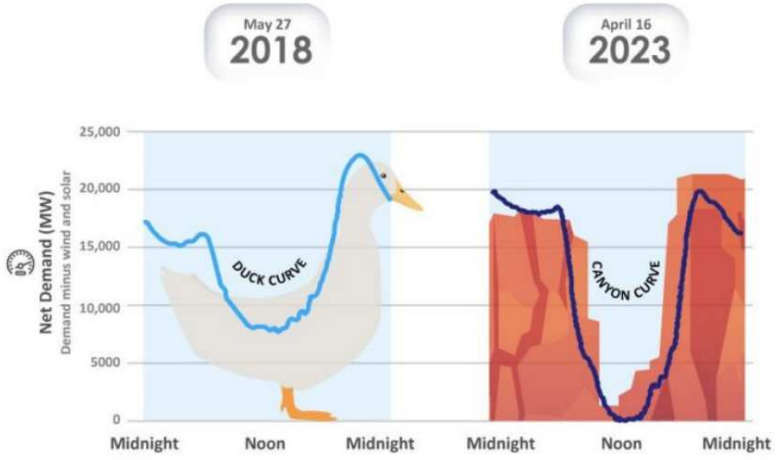
SAFE HARBOR

Cautionary Note Regarding Forward Looking Statements: This presentation contains forward-looking statements made regarding matters which are not historical facts, such as anticipated Net Revenue timing and amounts, expenditures and expansion plans; achieving gross margin positive operation and the timing thereof; costs associated with land acquisitions; costs associated with construction, equipment purchases and shipping; strategic and business plans; planned and potential activities and expenditures, are "forward looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and Canadian securities legislation and involve risks and uncertainties that could cause actual results to differ materially from those projected, anticipated, expected or implied. These risks and uncertainties include, but are not limited to, operating problems or accidents at operating project facilities; permitting problems or delays; variations in grid power requirements and power costs; delays or changes in planned expansions; equipment problems or delays; failure of equipment and improvements to achieve anticipated results including anticipated energy production, timing and cash operating costs; delay in achievement of cash flow gross margin positive operations for the outlined Pumped Storage Hydro Projects; energy price volatility, lower net back energy prices than anticipated and their impact on the timing of positive cash flow at the outlined Pumped Storage Hydro Projects; the availability of external financing, if required, on acceptable terms or at all; operating risks and results; future actions of governments of countries where our properties are located; world economic and capital markets conditions; and our future performance and expectations about our performance.

THE CAISO POWER GRID



ORIGINAL DUCK CURVE



PRESENT DAY CANYON CURVE

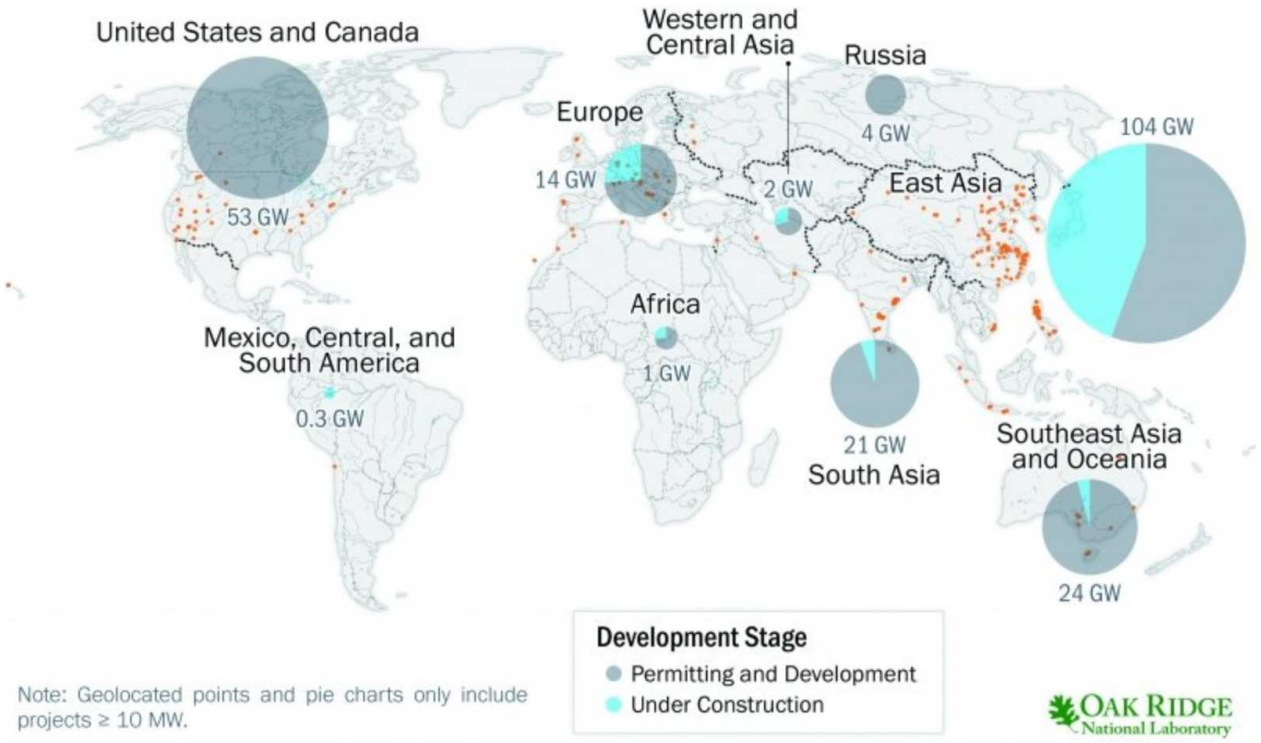
- The original duck curve shows the challenge with the growing solar resource that results in net demand being reduced during the day(duck's belly) and increasing at sunset (duck's neck), with the duck's belly getting deeper and the neck getting steeper and longer with every year.
- The duck's belly can cause both over-generation issues and renewable curtailment.
- The neck can make it more difficult for the resource fleet to be flexible enough to ramp up.
- The southwest energy system has morphed from the duck curve to the canyon curve.
- Flexibility is paramount to address the challenges associated with the Canyon Curve.
- Pumped Storage Hydro will play a big part in delivering flexibility to the energy system. PSH will reduce the gas generation that is currently being used to climb out of the canyon.

Power Magazine, Duck Curve Now Looks Like a Canyon, Sonal Patel, Apr 27, 2023.

PUMPED STORAGE HYDRO

ENERGY STORAGE AND GROWTH

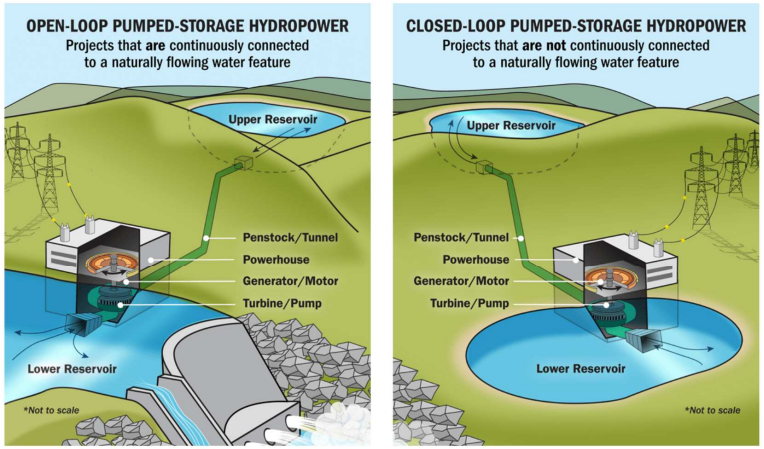
- First known cases of PSH were found in Italy and Switzerland in the 1890's.
- PSH first used in the United States in 1930.
- PSH currently accounts for 96% of all utility-scale energy storage in the United States.
- 43 PSH plants currently operating in the United States.
- United States PSH facilities originally built to compliment nuclear base load power plants.

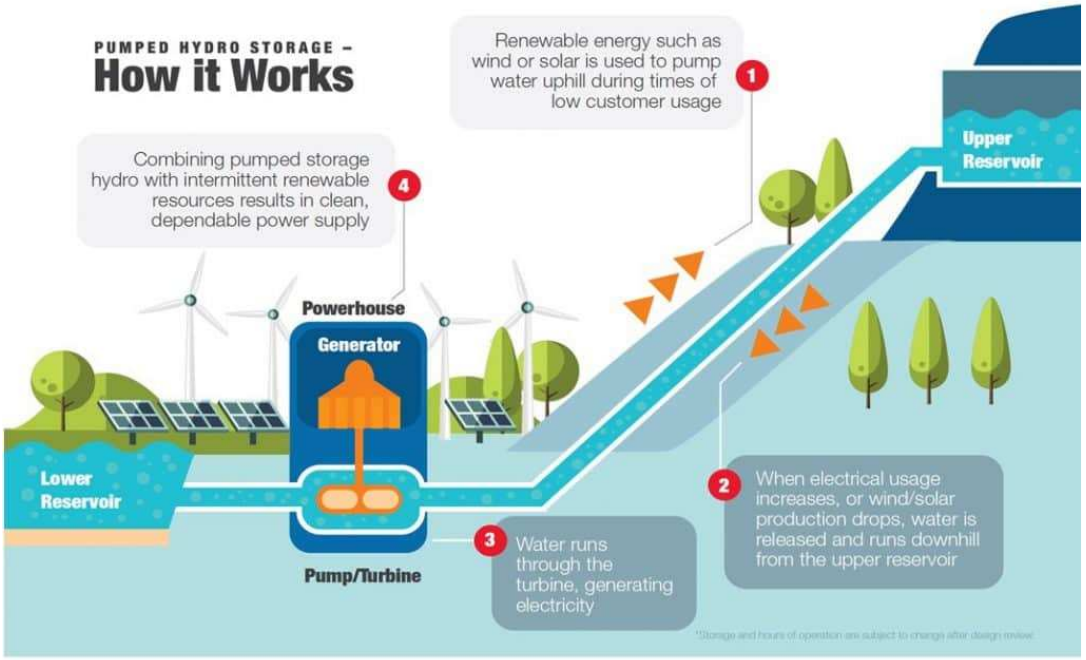


PUMPED STORAGE HYDRO (PSH)

STORING RENEWABLE POWER

Closed and Open Loop Pumped Storages operate with an upper and lower reservoir of water that is continually pumped and drained from one reservoir to the other. The pump/turbine is used to pump water up to the upper reservoir during the low peak periods. The water drains from the upper reservoir, through the turbine, to the lower reservoir generating energy during the high peak periods. PSH facilities can operate 12 hours per day or more, depending on their reservoir sizes, producing clean reusable peak energy.





PUMPED STORAGE HYDRO RESERVOIRS

WORLDWIDE EXISTING PSH RESERVOIRS

STORAGES TECHNOLOGIES AVAILABLE

PUMPED STORAGE HYDRO – LARGE CAPACITY STORAGE

TYPE	Max. Power Rating (MW)	Discharge Time	Max. Cycles Lifetime	LCOS[1] Levelized Cost of Storage	Efficiency	Capital Cost US$/kW
Pumped Storage PSH	3,000	4h – 16h	30 - 80 Years	$0.105	70 – 85%	$1,700 - $5,100
Li-ion Battery	1,000	1 min – 8h	1,000 – 10,000	$0.160	85 - 95%	$2,500 - $3,900
Lead-Acid Battery	100	1 min – 8h	6 – 40 years	$0.330	80 – 90%	$139
Molten Salt (Thermal)	150	hours	30 years	No data	80 – 90%	$350
Compressed Air CAES	1,000	2h – 30h	20 – 40 years	$0.105	40 – 70%	$800 - $1,550
Flow Battery	100	hours	12,000 – 14,000	$0.180	60 – 85%	$5,200
Hydrogen	100	mins - week	5 – 30 years	$0.350	25 – 45%	$1,500

EESI, Energy Storage, February 2019

- LCOS[1] unit: US$/kwh, (US Department of Energy, 2022 Grid Energy Storage Technology Cost and Performance Assessment, August 2022).
- PSH facilities can typically provide 10 to 12 hours of electricity, compared to about 6 hours for lithium-ion batteries.
- **PSH projects are long-term investments:** Bath County, Virginia PSH (3-GW) operating since 1985.

PEAKING POWER PLANTS (aka PEAKERS)

TYPICALLY USED IN CONJUNCTION WITH BASELOAD POWER PLANTS

- Peak hours during the day are in the morning with industry starting up, afternoons with home activities, heating in the mornings for the northern climate, and A/C in the afternoons in the southern climates.
- Peaker plants are used to ensure grid reliability, from energy peaks.
- Peaker plants are natural gas turbines, or natural gas engines.
- A peaker plant may operate many hours or a few hours per day, depending on the load requirement.
- 10% of the grid infrastructure is built to supply energy during peak demand. The actual peak demand is estimated to be 1% of the year.
- Pumped Storage Hydro (PSH) is the largest form of energy storage on the market today. A PSH replaces the peaker plants by giving the grid energy flexibility (dispatchable power).
- A PSH combined with solar is a true form of renewable (green energy).

PROJECT DESCRIPTION

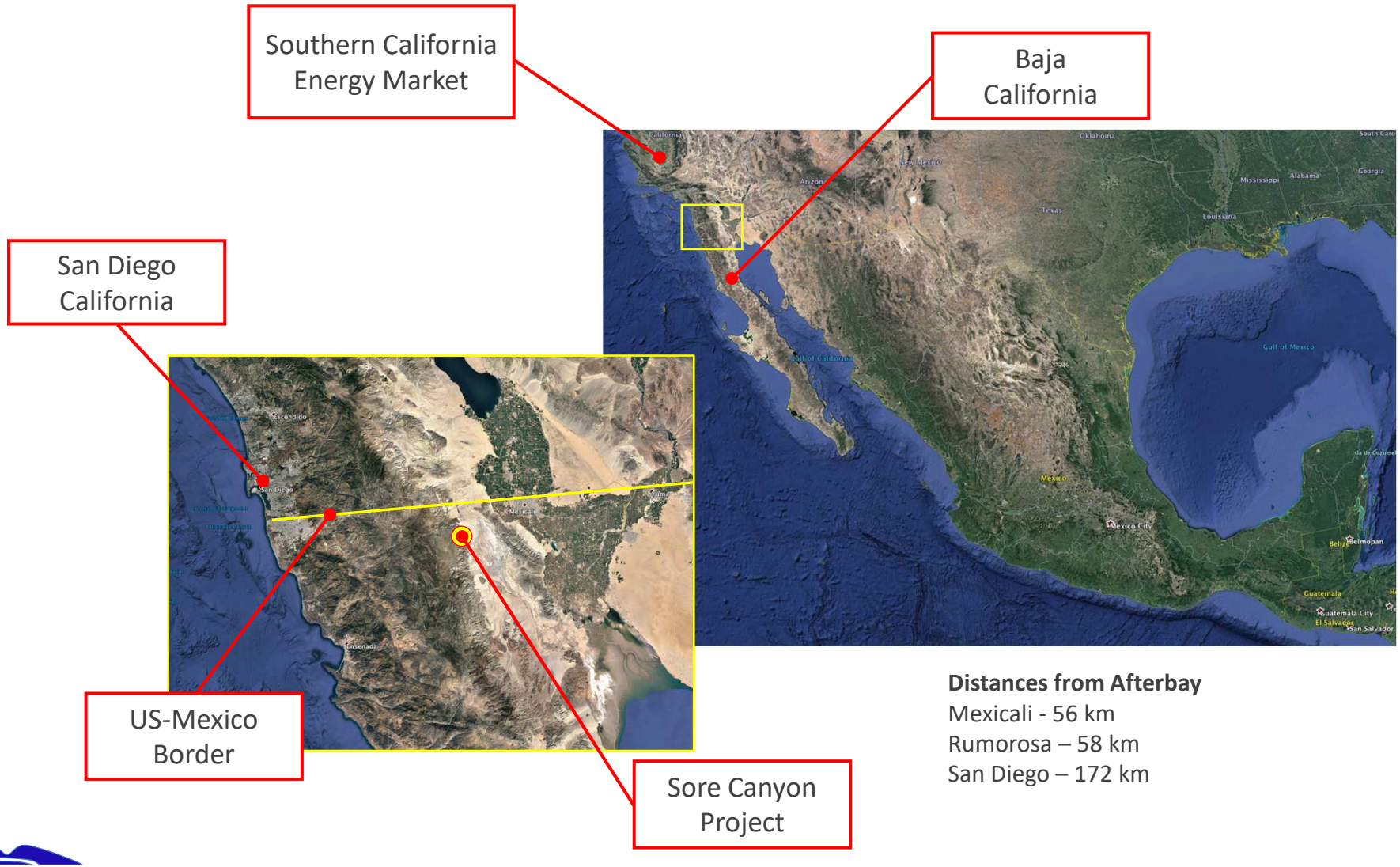
SORE CANYON PLAN COMPONENTS

The proposed project is a Pumped Storage Hydro (PSH) unit combined with a nearby Imperial Valley solar installation will classify this PSH and the solar installation as a hybrid Pumped Storage Hydro project. The Sore Canyon project consists of the following components:

- Forebay and Afterbay.
- Two Powerhouses; capability of generating 2,000-MW for up to 12-hours per day (based on reservoir sizes).
- Staged construction design to enable “right level capitalization and generation capacity”.
- Drainage control dams and diversion tunnel network.
- Underground access with surface infrastructure.
- Six 382-MW Pelton Wheel/pump units (pump units drive motor size).
- 53-km 500kV OH transmission line from the project to an existing substation.

PROJECT LOCATION

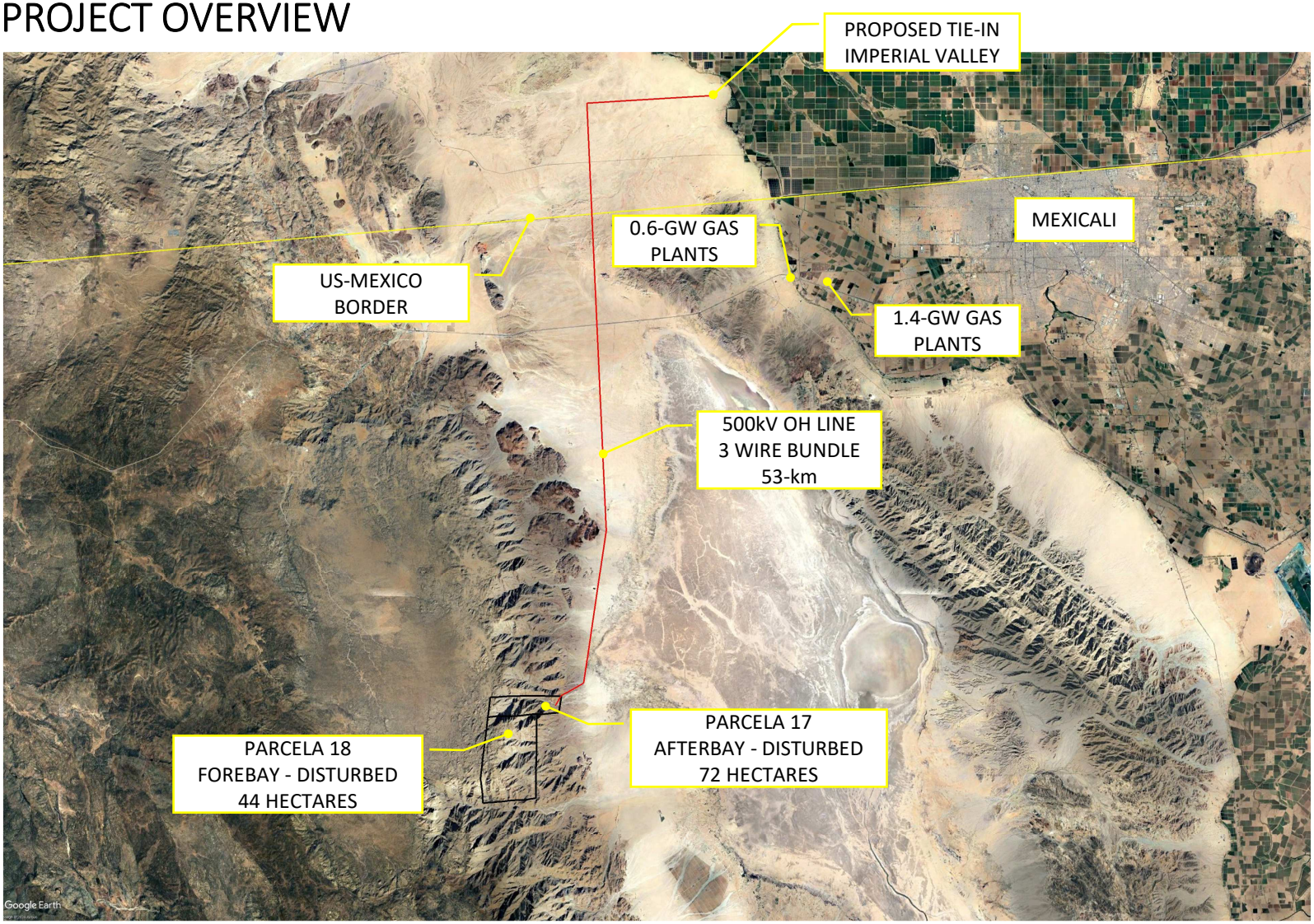
THE SORE CANYON PROJECT IS LOCATED IN NORTHERN BAJA CALIFORNIA, MEXICO



Distances from Afterbay
Mexicali - 56 km
Rumorosa – 58 km
San Diego – 172 km

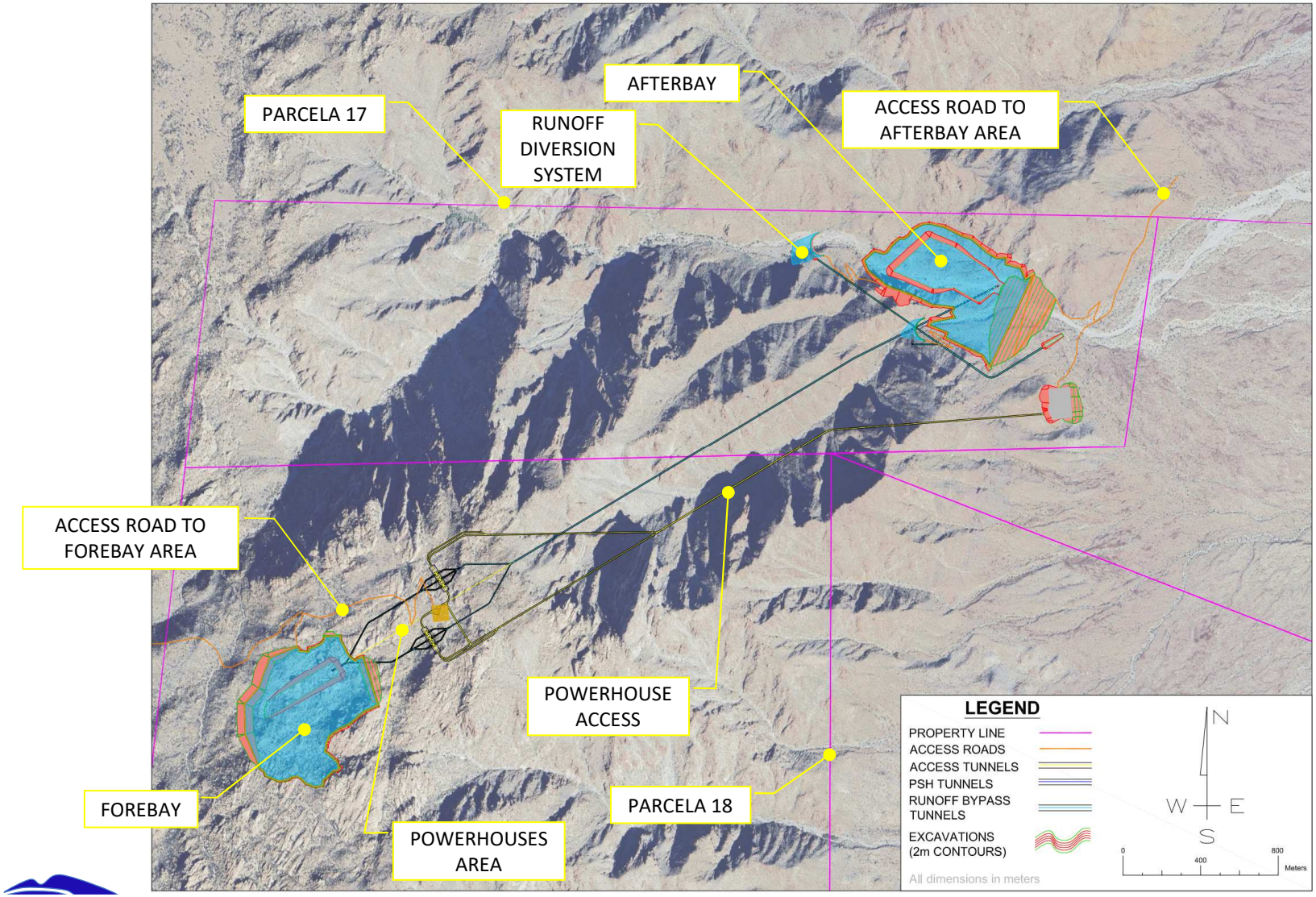
SORE CANYON PROJECT

PROJECT OVERVIEW



SORE CANYON PROJECT

GENERAL LAYOUT



POWERHOUSE DESIGN

2000 MEGAWATTS GENERATING CAPACITY

The 1,000 plus meters of head Sore Canyon Project will consist of six Ternary Pump Turbine units; A motor generator, a separate Pelton wheel and a pump. The air-cooled motor generator unit will be capable of 382-MW. This configuration offers the best answer for a very fast grid response, being carried out with the torque converter which allows fast change over between turbine and pump mode. The Escondido Canyon project is designed to have a Round-Trip Efficiency (RTE) of 77.1-percent. The six Pelton wheels/generators will develop 2,000MW of peak power for delivery to the Southern California grid or northern Baja Mexico grid. The flow of water through the six turbines when producing full power is calculated to be 176.5 m^3/sec. The generators will output 23-kV that is stepped up to 500 kV in the underground Transformer Hall. The power transmission will be delivered from the underground Transformer Hall to the surface switch station, located at the surface infrastructure pad, using high tension UG cable assemblies.

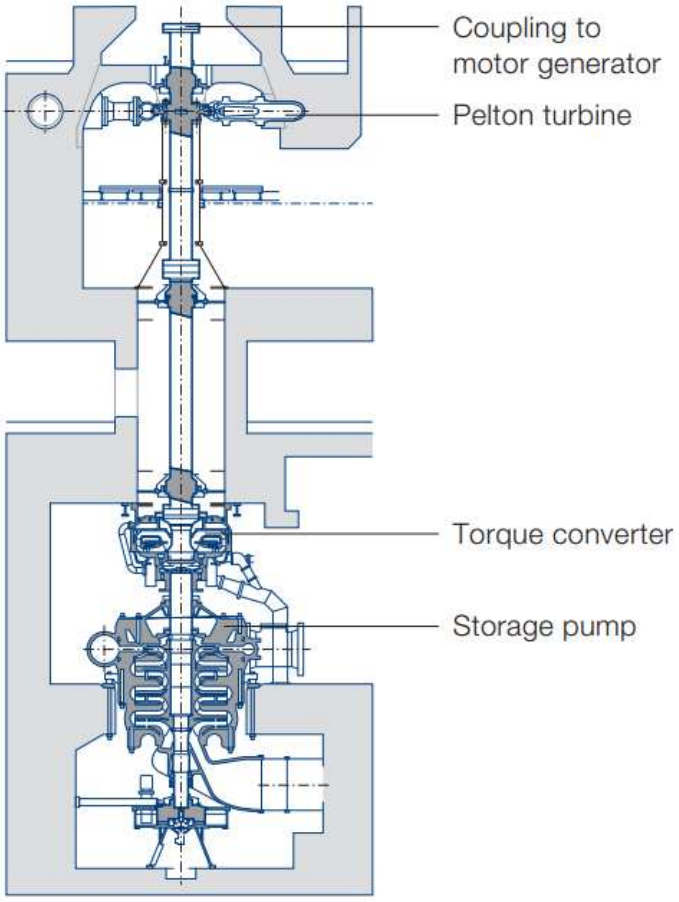
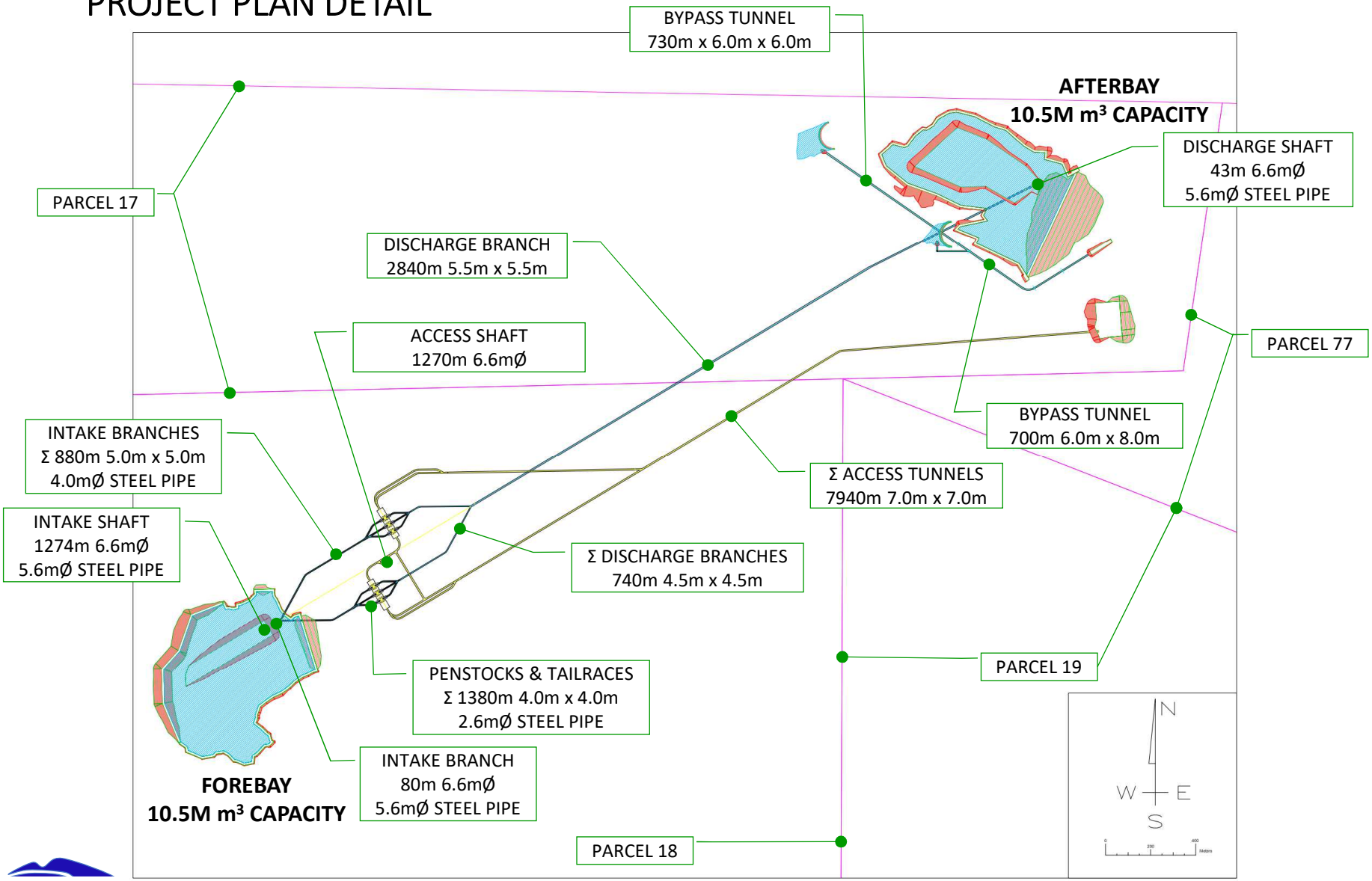


FIGURE: Ternary Pump Turbine Unit

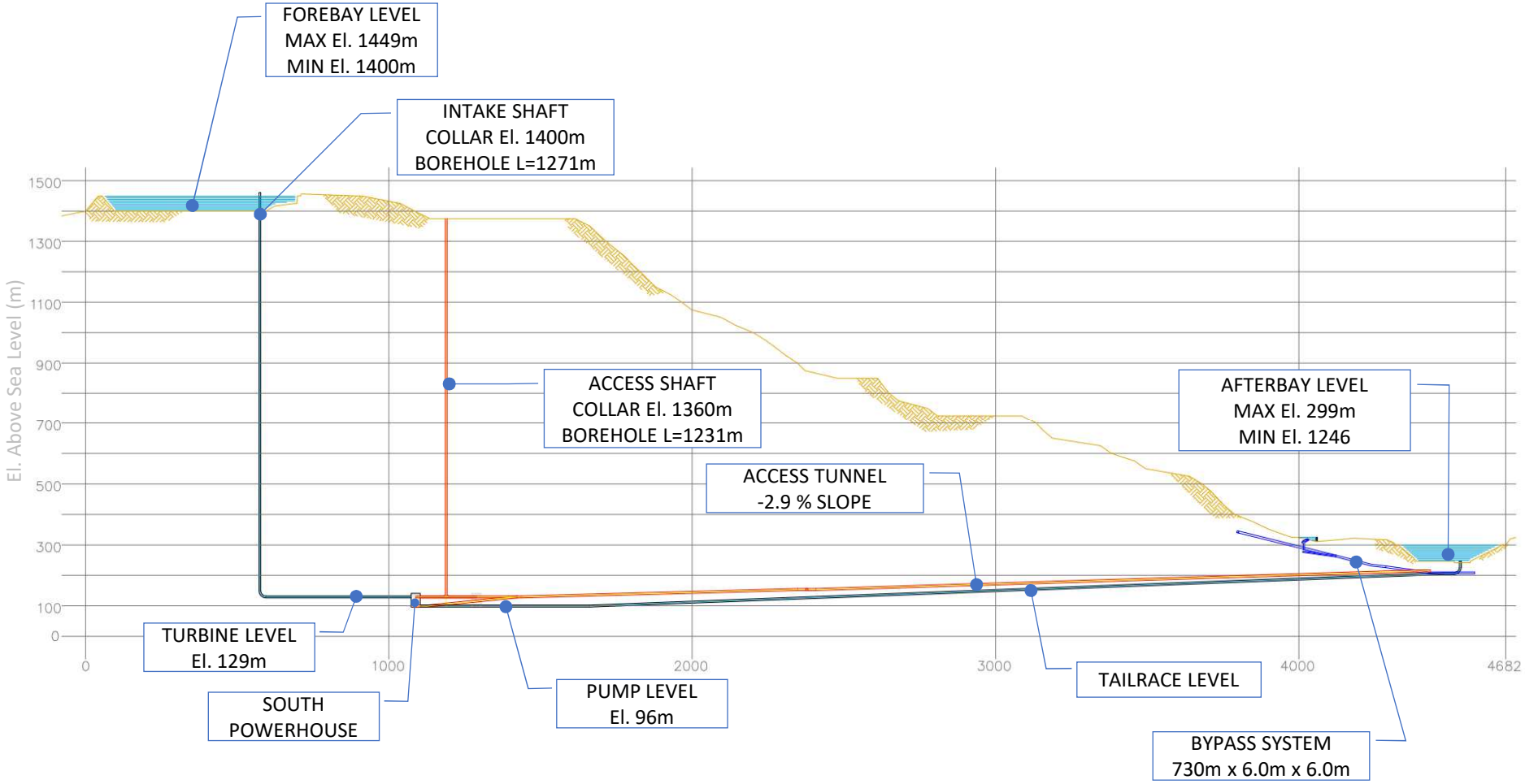
SORE CANYON PROJECT

PROJECT PLAN DETAIL



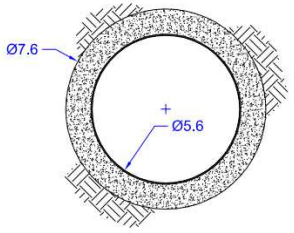
SORE CANYON PROJECT

PROJECT ELEVATION VIEW

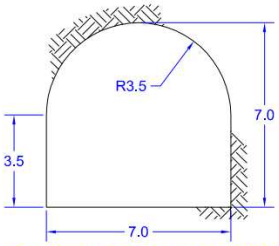


- Turbine psi static head 124–bars (1800-psi).
- System RTE is 80%.

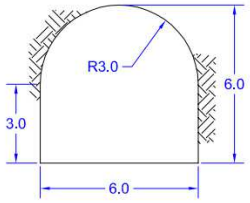
TUNNEL CONFIGURATIONS



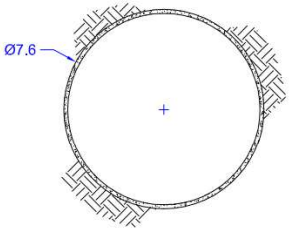
BOREHOLE WITH STEEL PIPE AND PERMEABLE CONCRETE (PC)



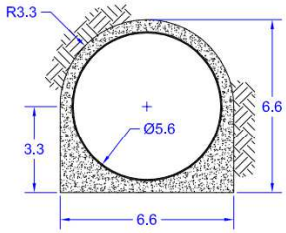
BARE ROCK ACCESS TUNNEL



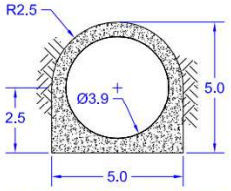
DISCHARGE WATER TUNNEL



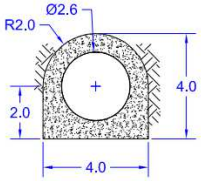
ACCESS SHAFT SHOTCRETE & BOLTS



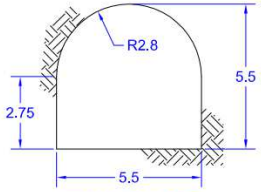
INTAKE TUNNEL SINGLE BRANCH STEEL PIPE & (PC)



INTAKE TUNNEL DOUBLE BRANCH STEEL PIPE & (PC)



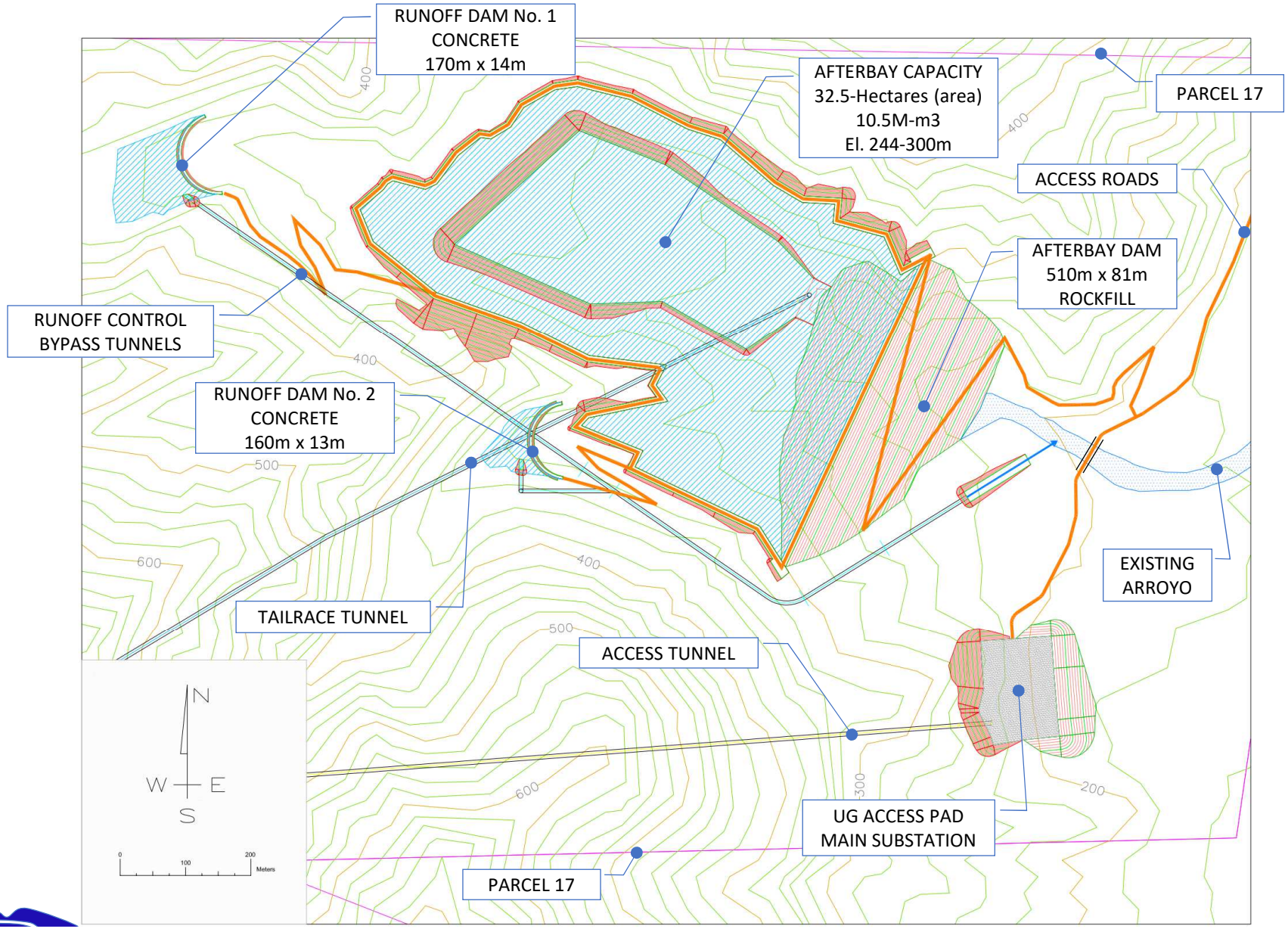
PENSTOCKS STEEL PIPE & (PC)



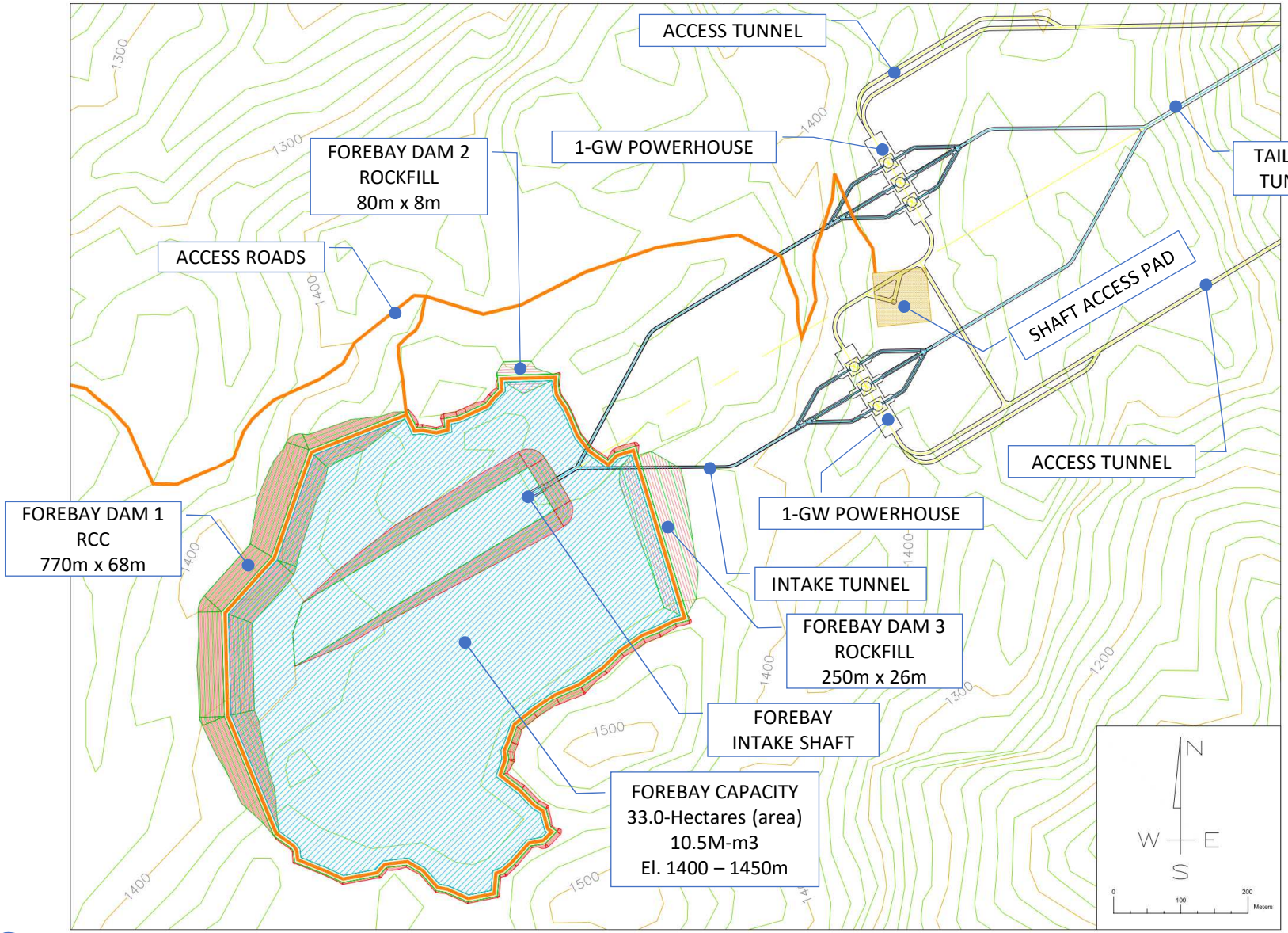
TAILRACE DISCHARGE TUNNEL

NOTE: All Dimensions in meters.

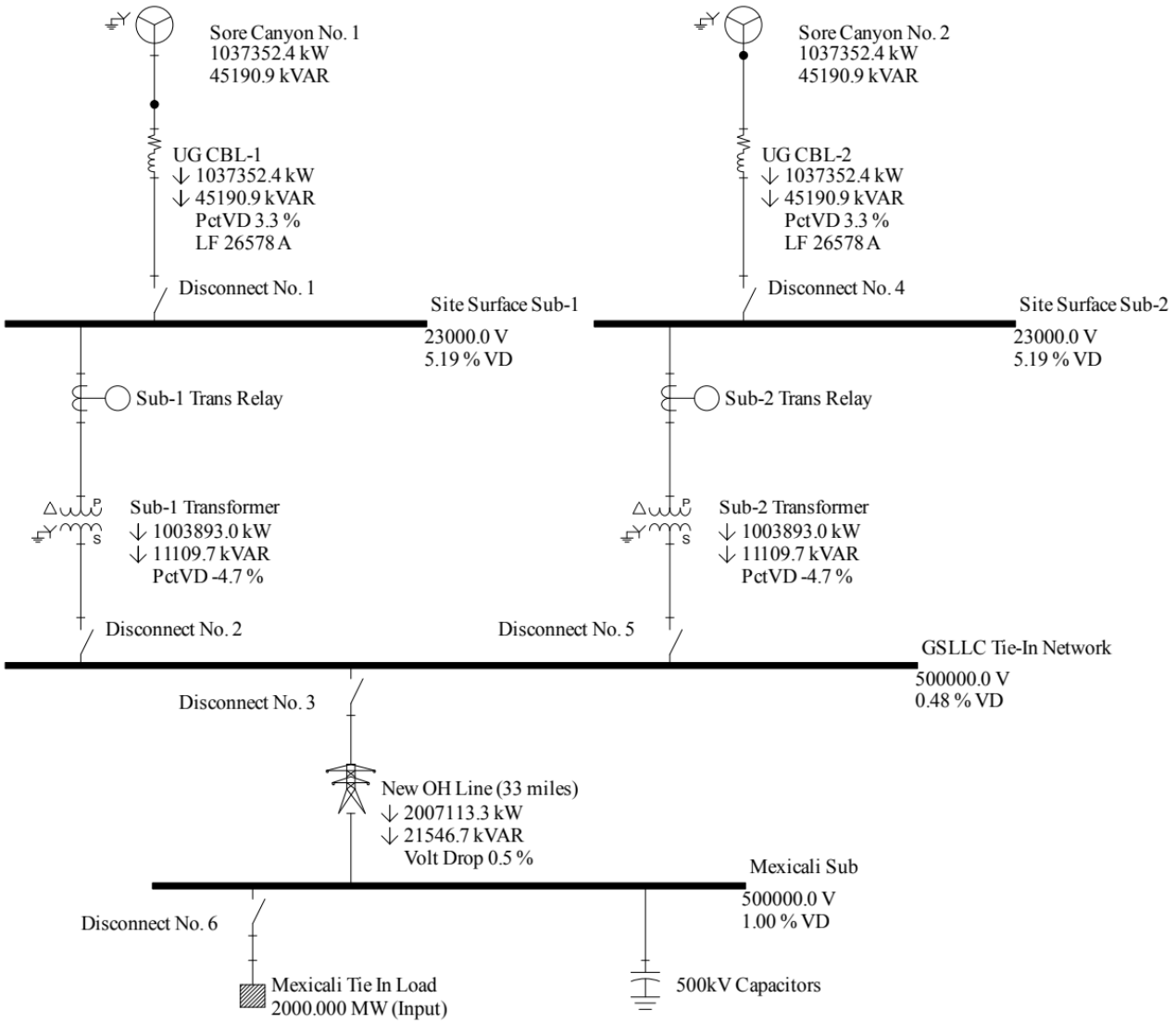
AFTERBAY


RUNOFF DAM No. 1
CONCRETE
170m x 14m
AFTERBAY CAPACITY
32.5-Hectares (area)
10.5M-m3
El. 244-300m
PARCEL 17
ACCESS ROADS
AFTERBAY DAM
510m x 81m
ROCKFILL
RUNOFF CONTROL
BYPASS TUNNELS
RUNOFF DAM No. 2
CONCRETE
160m x 13m
EXISTING
ARROYO
TAILRACE TUNNEL
ACCESS TUNNEL
UG ACCESS PAD
MAIN SUBSTATION
PARCEL 17
N
W
E
S
0
100
200
Meters

FOREBAY

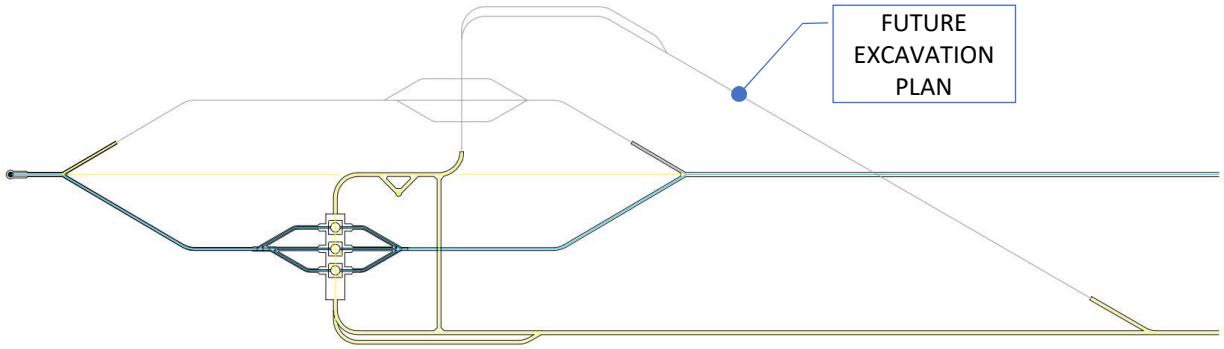

ACCESS TUNNEL
FOREBAY DAM 2
ROCKFILL
80m x 8m
1-GW POWERHOUSE
TAILRACE
TUNNEL
ACCESS ROADS
SHAFT ACCESS PAD
ACCESS TUNNEL
FOREBAY DAM 1
RCC
770m x 68m
1-GW POWERHOUSE
INTAKE TUNNEL
FOREBAY DAM 3
ROCKFILL
250m x 26m
FOREBAY
INTAKE SHAFT
FOREBAY CAPACITY
33.0-Hectares (area)
10.5M-m3
El. 1400 – 1450m
N
W
E
S
Meters

PRELIMINARY ENERGY TRANSMISSION

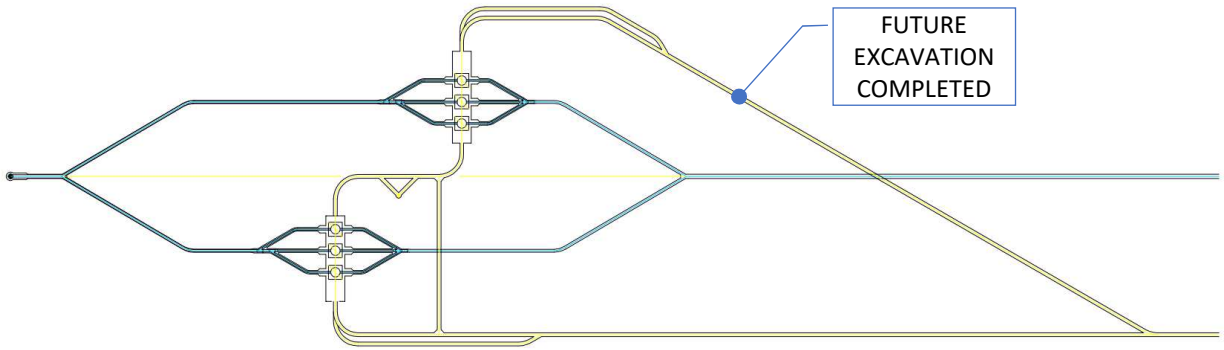


STAGED CONSTRUCTION

REDUCED CAPITAL WITHOUT REDUCING FUTURE CAPABILITY



STAGE 1: 380-MW TO 1000-MW INSTALLED



STAGE 2: 1380-MW TO 2000-MW INSTALLED

STAGED CONSTRUCTION

a) The Feasibility study will determine the best projection of future energy demand for the Sore Canyon PSH.

b) If projected demand is less than 1-GW, then build Stage 1 excavation and construction. Installing 1, 2, or 3 pump/turbine units.

c) Electrical Mechanical is 60% of the PSH capital cost; the additional excavation and infrastructure is a small investment to allow easy future expansion.

d) The stage 2 excavation will be completed with energy demand growth; bringing the project to it's full potential.

PROJECT PROGRESS

THE SORE CANYON PROJECT IS ADVANCING TOWARDS BEGINNING CONSTRUCTION IN 36 MONTHS FROM NOW

The project's major milestones, and their status, required to begin construction are:

- ❑ Land Purchase – **Complete**
- ❑ Water Permits and Agreements – Met with Conagua personnel and currently developing the project's requirements.
- ❑ Environmental Permit – Selected contractor and started initial investigations.
- ❑ Construction Permits – Discussed permits with the local Rumorosa government.
- ❑ Urban Construction Zoning Agreement – Discussed permits with the local Rumorosa government.
- ❑ Mexican Transmission and Connection Agreement - Met with CEA personnel and developing the project's requirements.
- ❑ California Transmission and Connection Agreement – Not Started.
- ❑ Geologic Investigation – Started.
- ❑ Hydrology Investigation – Not Started.

LAND and ENVIRONMENT

THE SORE CANYON SITE IS A CLOSED LOOP PSH FACILITY WITH A SMALL ENVIRONMENTAL FOOTPRINT (LESS THAN 100 HECTARES)

Area Geology

The Sierra de Juarez mountains, in the project region, are made up of primarily granite with some basalt caps and areas of metamorphic gneiss and schist. Conglomerate occurs near the valley floor and the valley floors are made up of alluvium. There is a fracture pattern characteristic of normal jointing within the granite in the area and a single range-front fault running north-south. The area has a small amount of seismic activity with one recorded earthquake along the possible extension of the noted range fault.

Private Land

The purchased land is located in the Sierra Juarez mountains, 34 km south of the US boarder. The final disturbance caused by the project will be less than 100 hectares, although the land purchase contains close to 2800-hectares.

Environment

The Sore Canyon Pumped Storage project will be constructed and operated with ISO-9000 and North American standards. All suppliers and contractors will be required to adhere to the same environmental standards and policies used by the project. The selection of the project site will not adversely affect any water sources, wildlife refuges or recreational areas. Programs will be developed for the employees to continually reduce the use of raw materials, energy and supplies. Significant community involvement for better environmental stewardship of the area will be started and maintained.

WATER

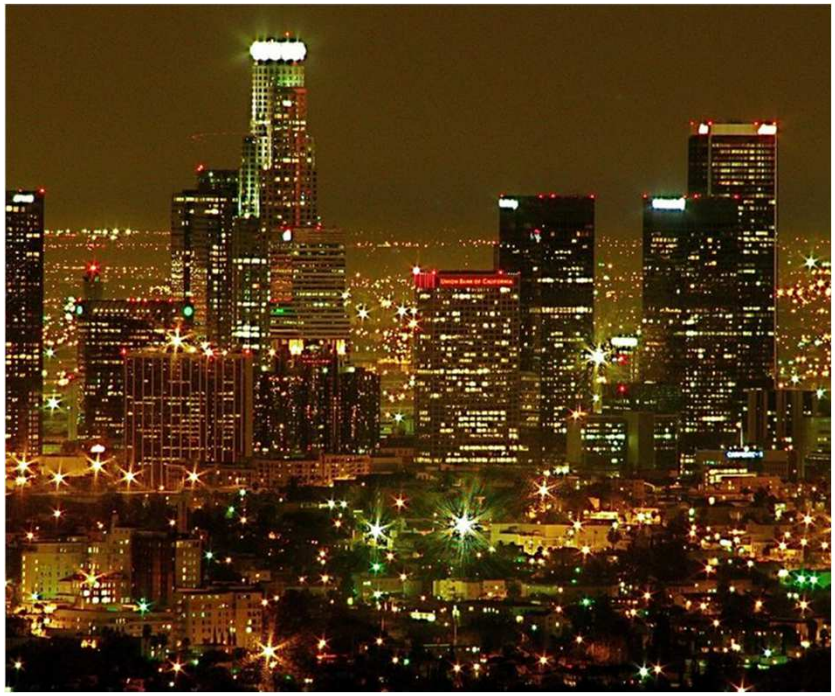
SECURING WATER FOR THE CONSTRUCTION AND OPERATION OF THE PROJECT

SORE CANYON PSH WATER REQUIREMENTS

Both reservoirs will be constructed with HDPE Liner installed on a clay/sand bed, to ensure a minimal amount of seepage once the reservoirs are placed in service. The lower reservoir will need to be filled once the construction of reservoir is complete. The filling of the lower reservoir will require approximately 1,046 hectare-meters. Gravity Storage LLC will request a permit from Conagua to perform this pre-operation task. Evaporation and seepage are the only water losses that the project will suffer once the project is in operation and this is calculated to be less than 21 hectare-meters annually. The current plan for gaining the project's required water is to capture flow from the main arroyo, located within the project, and to develop a small well field east of the project in the downhill area from the afterbay.

PSH REVENUE

THE REVENUE STREAM ASSOCIATED WITH PUMPED STORAGE HYDRO UNITS



REVENUE STRATEGY

The goal with marketing energy from the Sore Canyon Pumped Storage Hydro project will be to secure a solid base load agreement with a utility connected to the Southern California or SMUD grids for 67-percent, or more, of the PSH's output. The balance of the produced energy will be sold to the utilities during peak or grid instability periods. This strategy maximizes the revenue stream for the project, while reducing the risk to the revenue stream.

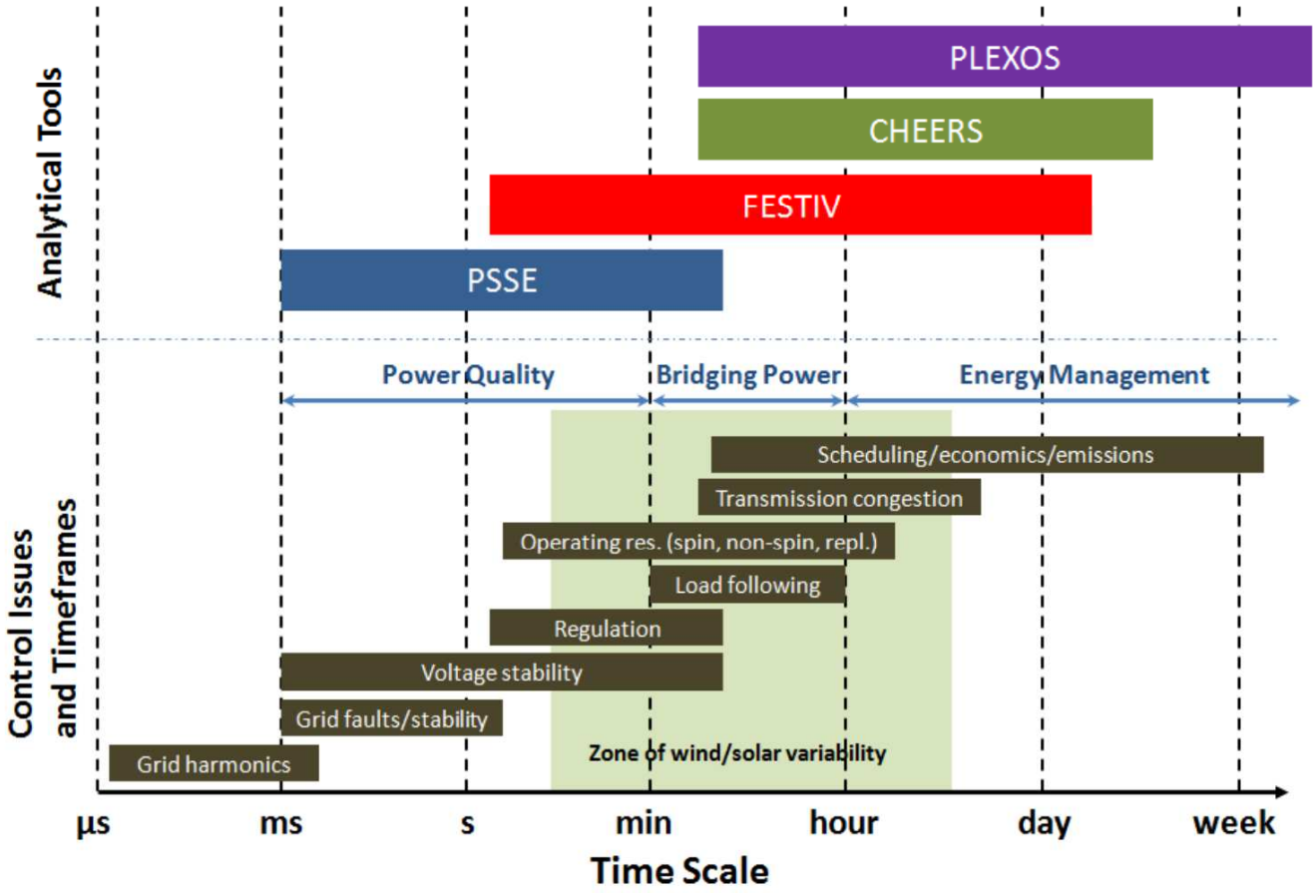
TYPES OF REVENUE APPLICABLE TO A PSH

1) ***Cost savings for other renewable energy:*** Annual total system production cost saving attributed to PSH capacity.
2) ***PSH Energy arbitrage net revenue:*** The value of energy arbitrage based on LMP (Locational Marginal Price) of electricity. The cost of charging the forebay is part of this Net Revenue.
3) ***Contributions to operating reserves*:** Reserves that are needed during times of low flexibility in the power system (grid load).
4) ***PSH will enable the addition of VER (Variable Energy Resources) units to the grid*:** PSH plants enable larger penetration of VRE in the power system by providing a large quantity of flexible system capacity that can be used to compensate for the variability and uncertainty of VER generation.
5) ***Reduced thermal startup costs*:** Savings generated by reducing the number of startups and shutdowns of thermal plants in the system.
6) ***Thermal generator ramping*:** Decreases the ramp ups and ramp downs of thermal plants in the system.
7) ***Reduction in transmission line congestion*:** Markets that use LMP have a transmission line charge component.

STUDIES AND SIMULATIONS

UNDERSTANDING OF THE PROJECT'S GRID CONTRIBUTION

- Analysis aimed to capture PSH dynamic responses and operational characteristics across different timescales, from a fraction of a second to days/weeks.



PROJECT PRELIMINARY ECONOMICS

PEAKER REPLACEMENT

GSLLC requires funding to have a transmission study completed to fully understand the project's revenue stream, however the project can be examined (preliminary) using available data from CAISO.

- Project economics using CAISO published power supply and demand; the project is assumed to be a Peaker replacement.
  - Three periods analyzed: May-Jun, Jul-Aug, Sep-Oct, Nov-Apr
  - At the completion of construction, the project may qualify for feed-in credits of $0.03/kWh.
  - The preliminary economic result is a 14.0-percent IRR and an $NPV_{3\%}$ of $10,862M, for a 40-year Project operating Life.

[1] Based on a Net Revenue that is Pre-Tax, no Tax Credits, and no depreciation or amortization.

SORE CARBON CREDITS

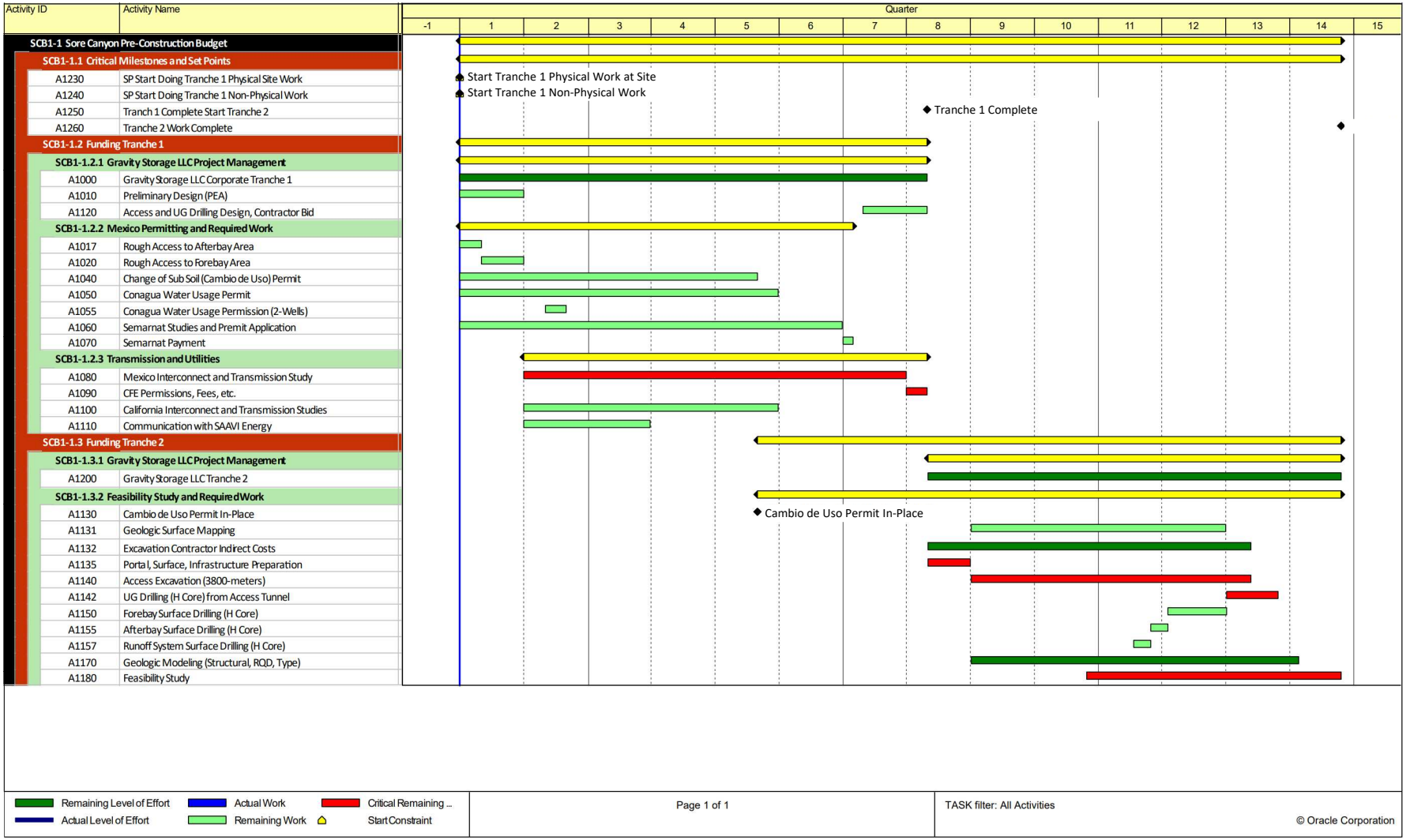
NATURAL GAS PEAKER REPLACEMENT

The Sore Canyon PSH, once constructed, will use solar generated energy (from the grid) to pump water from the low reservoir to the upper reservoir. The PSH power generation cycle will be coordinated with replacing operating Peaker generation plants that would normally be on-line.

- Peaker Plants generate 484-grams CO_2 per kwh.
- The 8-hr. high peak energy demand period currently utilizing Peaker power will instead use the Sore Canyon PSH power.
- The supply of Sore Canyon PSH power will generate 3.1M-tons of carbon credits per year.
- The Sore Canyon PSH can supply power an additional 4-hrs. per day resulting in 1.5M-tons of carbon credits per year.

SORE CANYON PRE-CONSTRUCTION SCHEDULE

TRANCHE 1 AND 2 ACTIVITIES



INVESTMENT PLAN

THREE STAGES OF FUNDING WILL BE USED TO BRING THE FACILITY ONLINE IN APPROXIMATELY EIGHT YEARS FROM NOW

PROJECT FINANCING: The project will advance using three tranches of financing, each phase accomplishing a specific set of milestones.

Tranche 1: Basic design optimization, utility discussions and transmission studies, environmental permits, site definition, water permits, change of land use permit, land ownership change, and project business structure development. A pre-feasibility study will be developed during this funding phase.

Tranche 2: Geotechnical drilling and evaluation (and reclamation of all areas disturbed during this activity), hydrology studies, feasibility study and construction budget (bankable documents) and base construction design, and all construction related permits required by state and local governments.

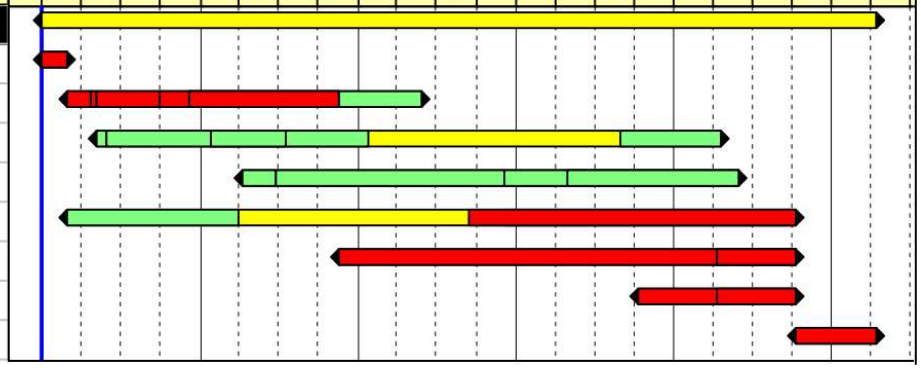
Construction Funding: All construction activities completed, including commissioning, connecting to the Southern California grid, initial filling of the reservoirs, development of the water supply field and market agreements with utilities. The market agreements will have a mix of base load salable power and grid stability power; maximizing the revenue while reducing the risk.

CONSTRUCTION SCHEDULE AND DURATION

PRELIMINARY CAPEX ESTIMATE

Sore Canyon Advanced — Full Gantt Chart — 02-May-24 14:33

Activity ID	Activity Name	Remaining Duration
SCA	Sore Canyon Advanced	2027
SCA.1	Project Roads, Infrastructure Setup	60
SCA.2	Access Pad and Tunnels, Powerhouse Excavation	896
SCA.3	Tailrace Tunnels & Piping, Afterbay Entry Construction	1534
SCA.4	Penstock Tunnels & Piping, Forebay Entry Construction	1204
SCA.5	Forebay and Afterbay Construction with Runoff Bypass	1784
SCA.6	Powerhouse Construction, UG 500kV Transmission Line	1095
SCA.7	OH 500kV Transmission Line and Connection	365
SCA.8	Startup and Commissioning	183



- CAPEX for PSH installations are currently $2,000/kw.
  - The Sore Canyon project is in Mexico and will realize a discount in construction labor.
  - The estimated CAPEX for full build-out is US$3.80B.
- Construction and commissioning should take approximately five-years from authorization to proceed. The physical work start date is dependent on:
  - Permitting and authorizations
  - Funding
  - Pump/Turbine and other critical items lead time at time of purchase.

NEXT STEPS

With Tranche 1 funding GSLLC intends to:

- Develop project goals and schedule.
- Basic design optimization.
- Utility discussions and transmission studies.
- Complete environmental studies, site definition.
- Gain a water consumption agreement.
- Develop a pre-feasibility study.
- Prepare for Tranche 2 work (the final pre-construction phase).

GRAVITY STORAGE LLC KEY PERSONNEL

LEADERSHIP FOR SUCCESSFUL PROJECTS

Richard Gresham
Technical Manager

David Drips
Projects Manager

Roberto Flores
Business Unit Manager

GS LLC PRINCIPALS:

Richard Gresham: BS Mining Engineering, University of Idaho
David Drips: BS Mining Engineering, Colorado School of Mines
Roberto Flores: : Industrial Engineer, Instituto Tecnológico de Sonora (ITSON) México

ADVISORY BOARD:

GE Renewable Energy: A global leader in advanced technology focusing on wind, hydro, and solar power generation services.
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FURTHER INFORMATION

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