ESCONDIDO CANYON PSH PROJECT

GRAVITY STORAGE LLC

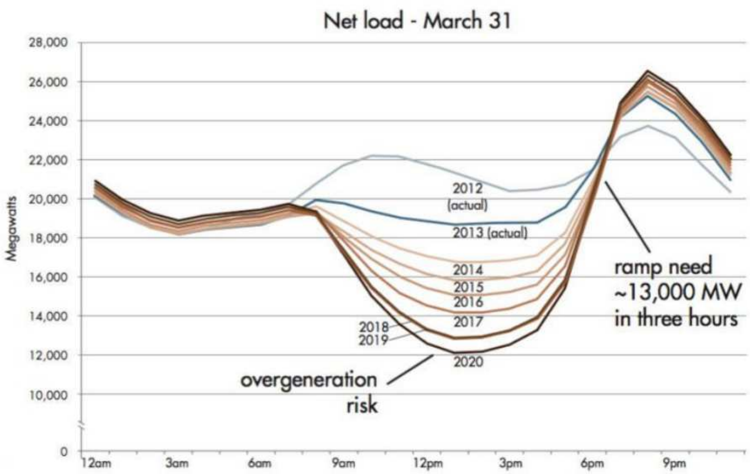
GS LLC

CAUTIONARY STATEMENT

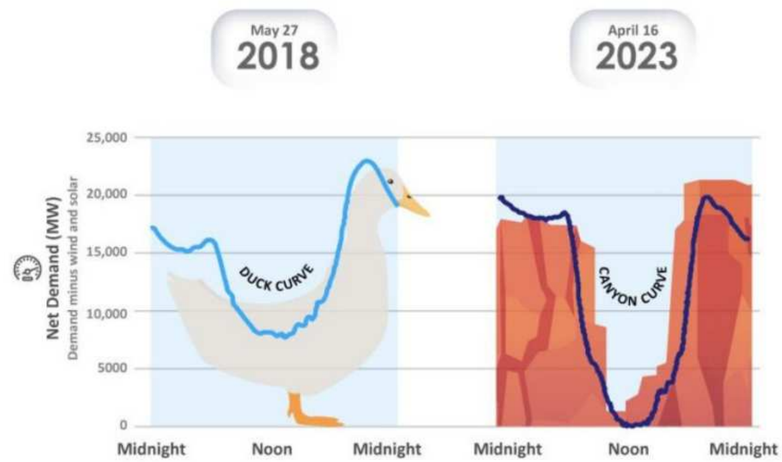
SAFE HARBOR

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

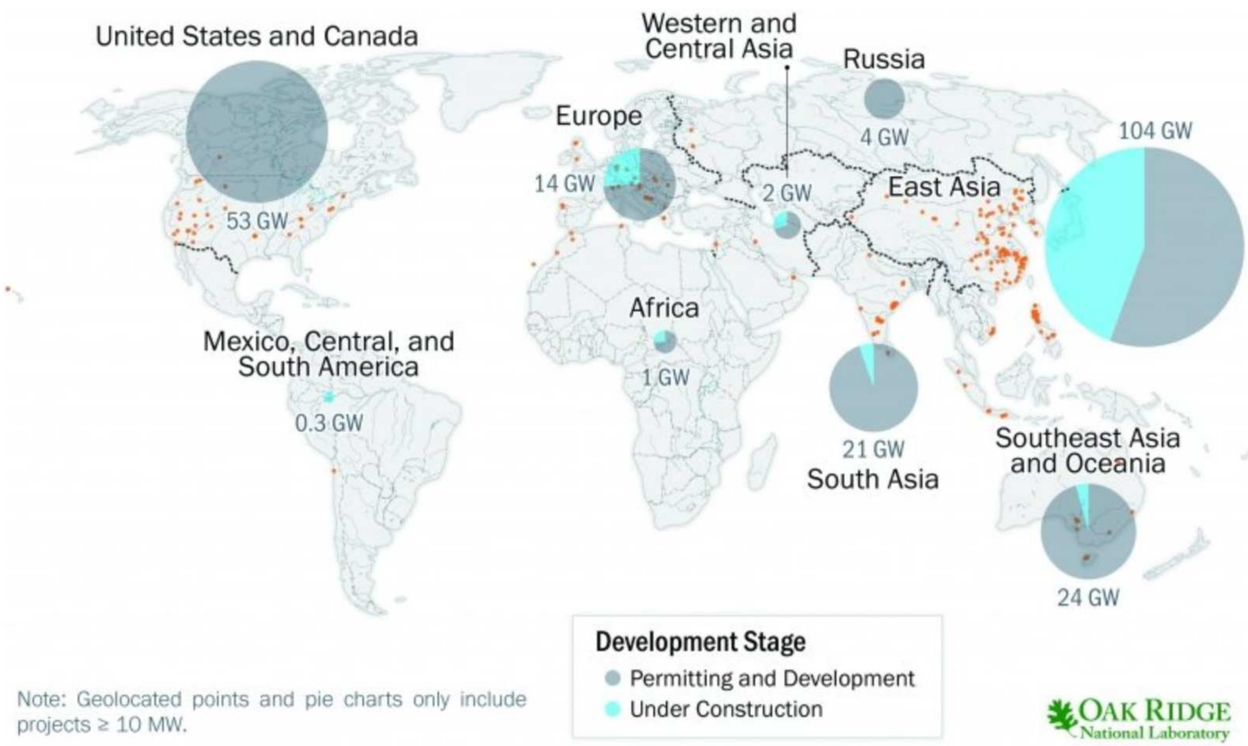
- The original duck curve shows the challenge with the growing solar resource that results in net demand being reduced during the day(duck's belly) and increasing at sunset (duck's neck), with the duck's belly getting deeper and the neck getting steeper and longer with every year.
- The duck's belly 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

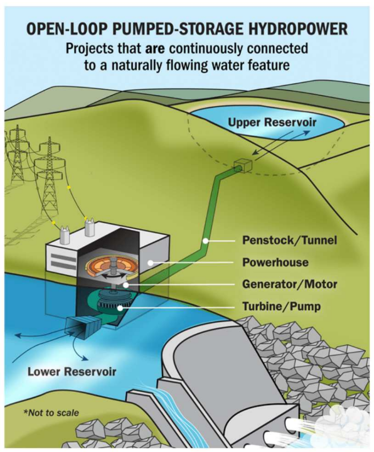
- First known cases of PSH were found in Italy and Switzerland in the 1890's.
- PSH first used in the United States in 1930.
- PSH currently accounts for 96% of all utility-scale energy storage in the United States.
- 43 PSH plants currently operating in the United States.
- United States PSH facilities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

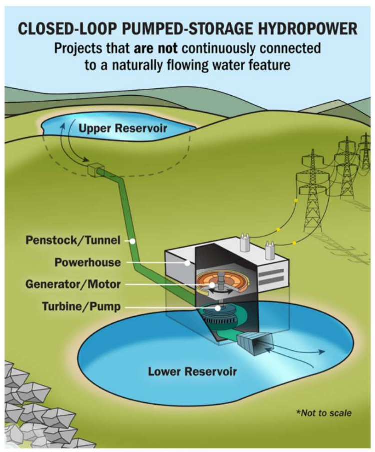


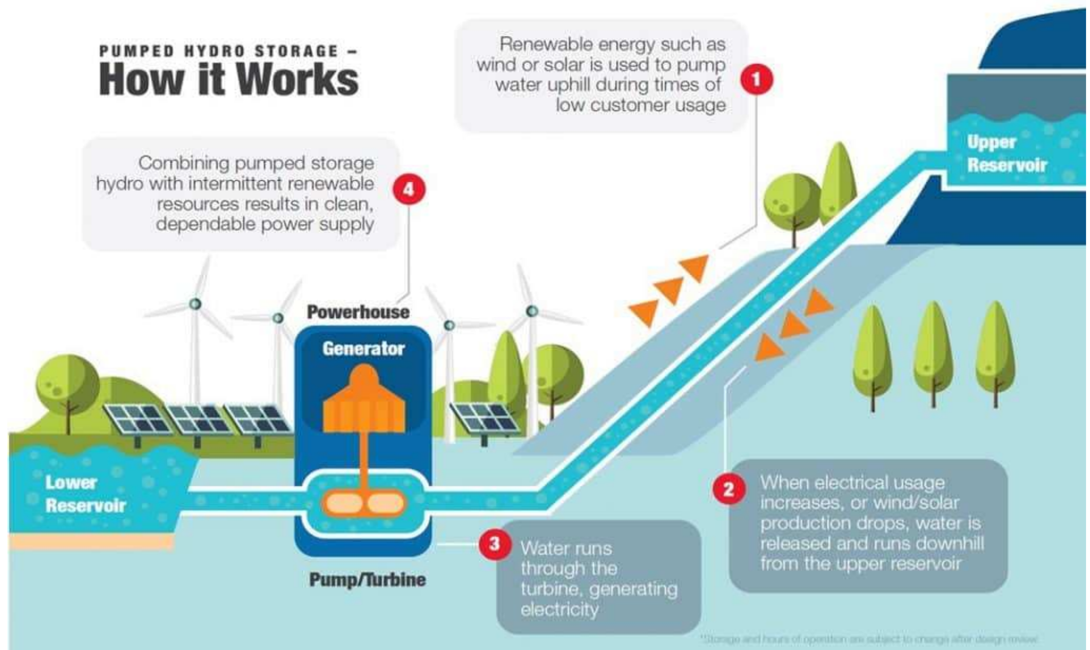
PUMPED STORAGE HYDRO (PSH)

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.



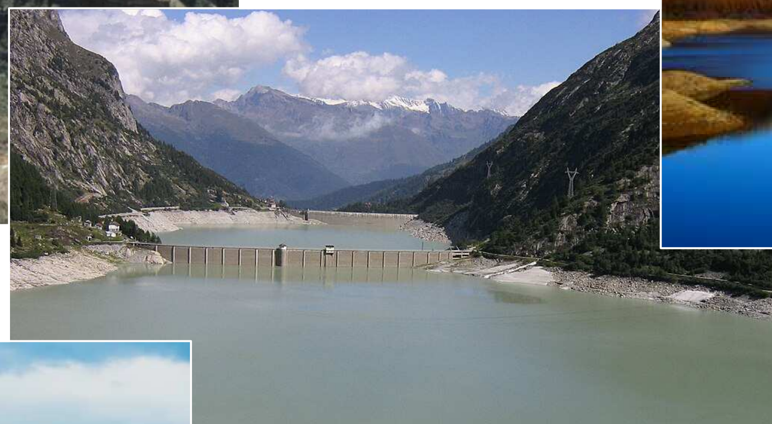




GSLLC

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).

GSLLC

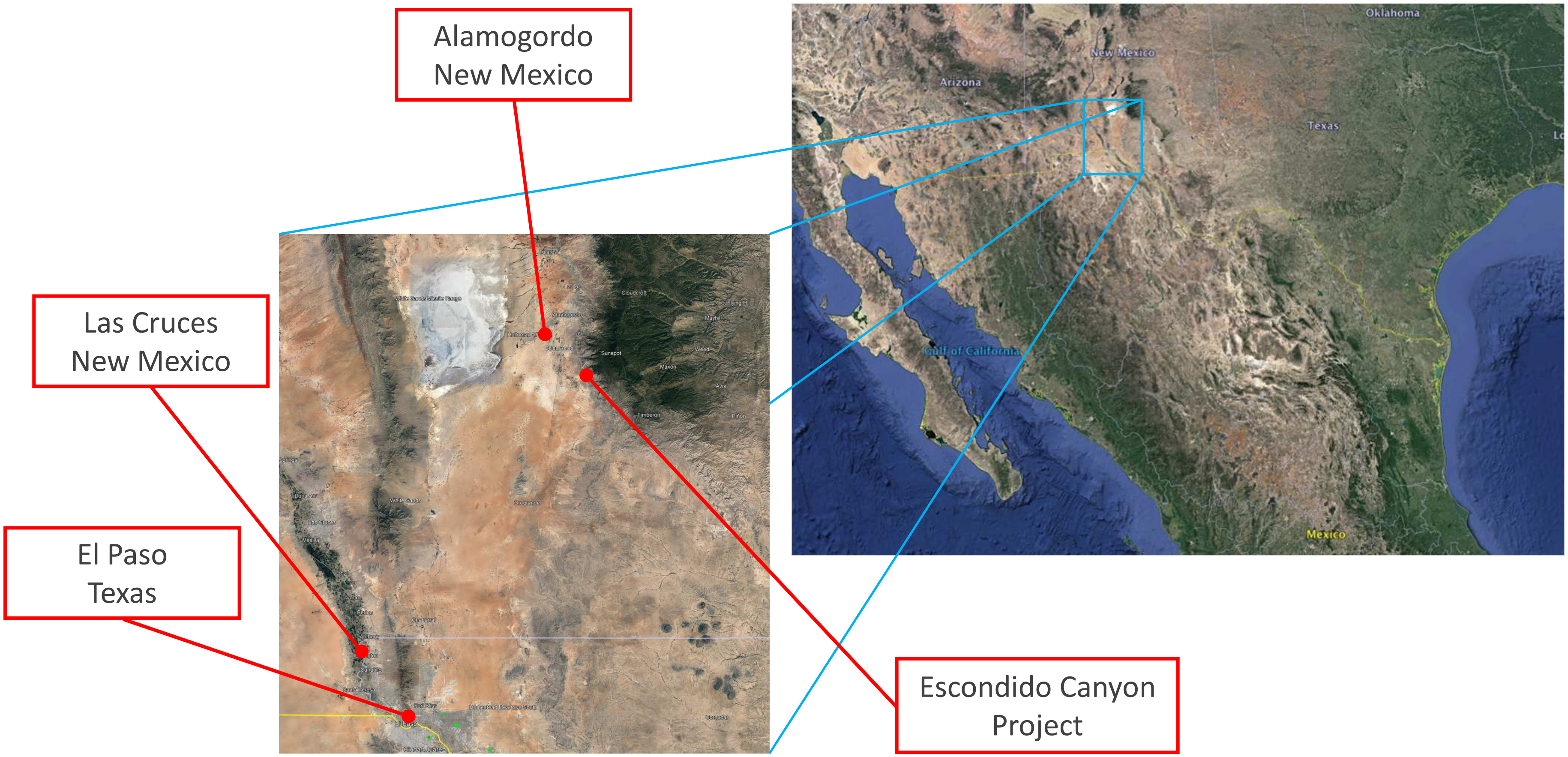
PROJECT DESCRIPTION
ESCONDIDO CANYON PLAN COMPONENTS

The proposed project is a Pumped Storage Hydro (PSH) located near Alamogordo, New Mexico. The Escondido Canyon project consists of the following components:

- Forebay and Afterbay, a closed Loop system.
- Two Powerhouses; capability of generating 2,000-MW for up to 12-hours per day (based on reservoir sizes).
- Staged construction design to enable “best level capitalization and generation capacity”.
- Drainage control canals constructed with rip-rap and gabion baskets.
- Underground access with surface infrastructure.
- Six 377/382-MW turbine/pump units.
- Construct 89-miles 345kV OH transmission lines from the project to existing lines and substations.

PROJECT LOCATION

THE ESCONDIDO CANYON PROJECT IS LOCATED IN NEW MEXICO, USA

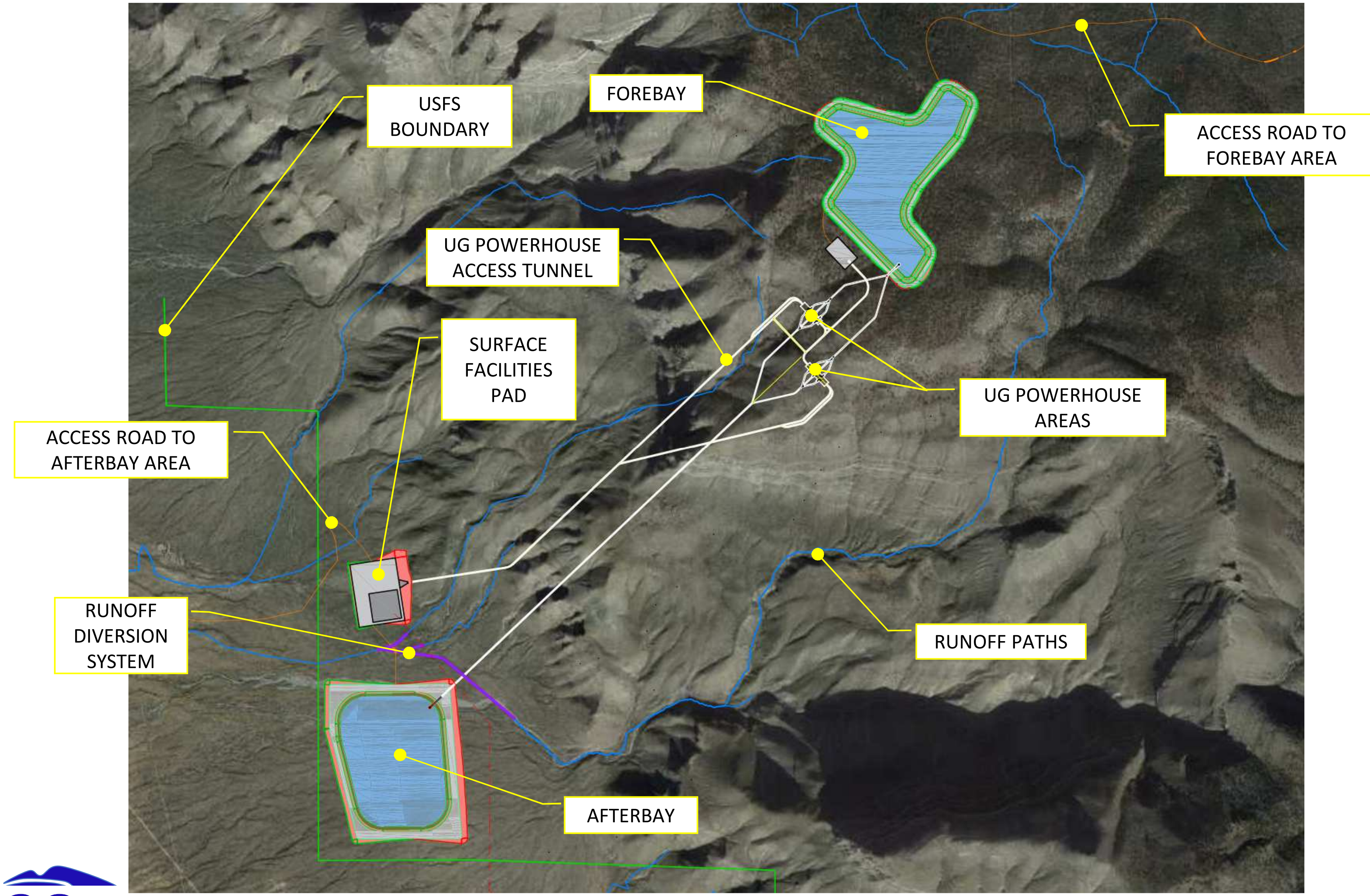


Distances from Afterbay
Alamogordo, NM – 8 miles
Las Cruces, NM – 70 miles
El Paso, TX – 83-miles

GS LLC

ESCONDIDO CANYON PROJECT

GENERAL LAYOUT



GS LLC

REGIONAL GEOLOGY

THE ESCONDIDO CANYON SITE IS PART OF SACRAMENTO MOUNTAINS ESCARPMENT

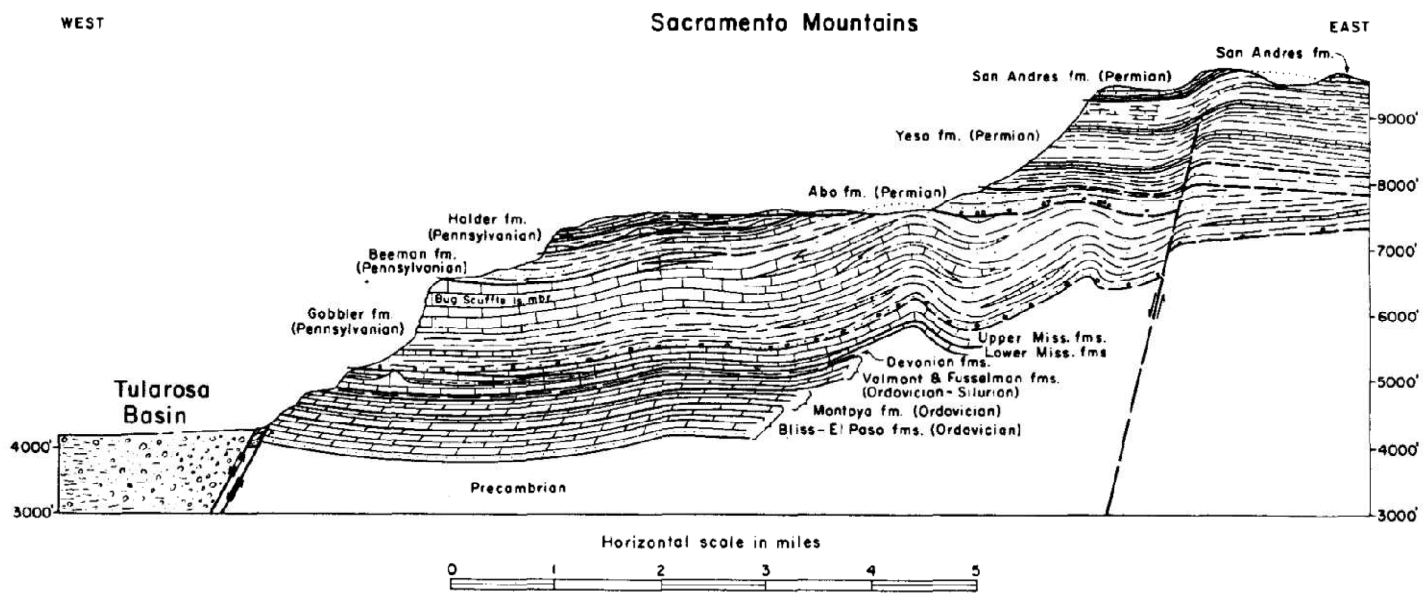


Figure 4

DIAGRAMMATIC CROSS-SECTION, CENTRAL PART, SACRAMENTO MOUNTAINS ESCARPMENT

The strata of the Sacramento Mountains range have an age interval from the Precambrian to Cretaceous periods and have a composite thickness of about 8,000 feet. The actual thickness in most places along the escarpment is closer to 5,000 feet, and the exposed sections consists entirely of Paleozoic rocks. The oldest rocks exposed in the Sacramento Mountains are about 100 feet of shales, siltstones, and quartzites that outcrop in a small area near the southern end of the escarpment. These exposed rocks are Precambrian in age, and the rock units are slightly metamorphosed and intruded by igneous sills.

POWERHOUSE DESIGN

2000 MEGAWATTS GENERATING CAPACITY

The 1,000 plus meters of head Escondido Canyon Project will consist of six Ternary Pump Turbine units; A motor generator, a separate turbine (Francis or Pelton) 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-percent. The six turbine/generators will develop 2000 MW of peak power for delivery to the Southern New Mexico grid. The flow of water through the six turbines when producing full power is calculated to be 3.22M-gpm. The generators will output 23-kV that is stepped up to 345 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.

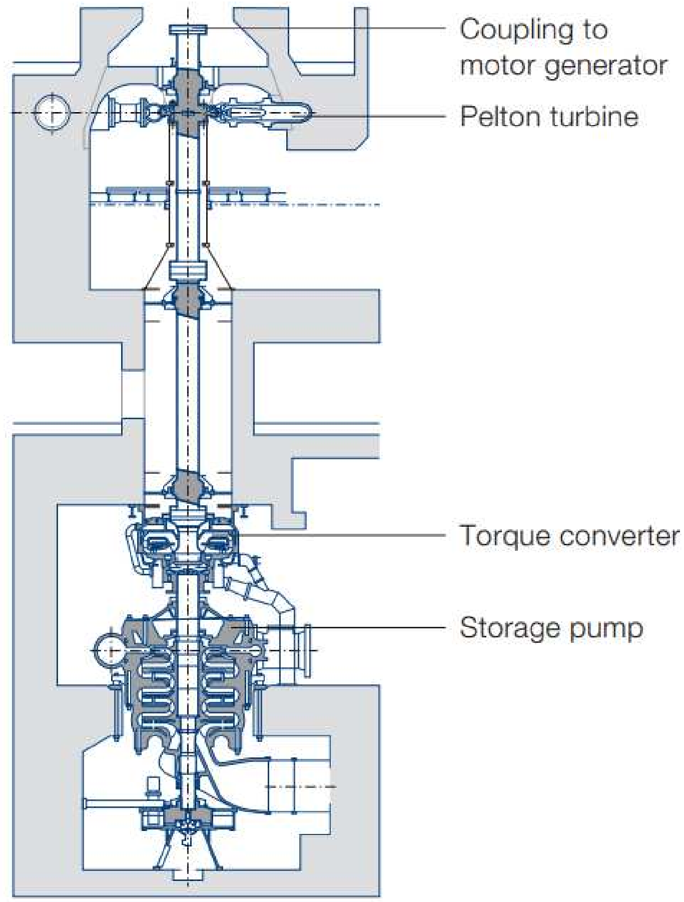
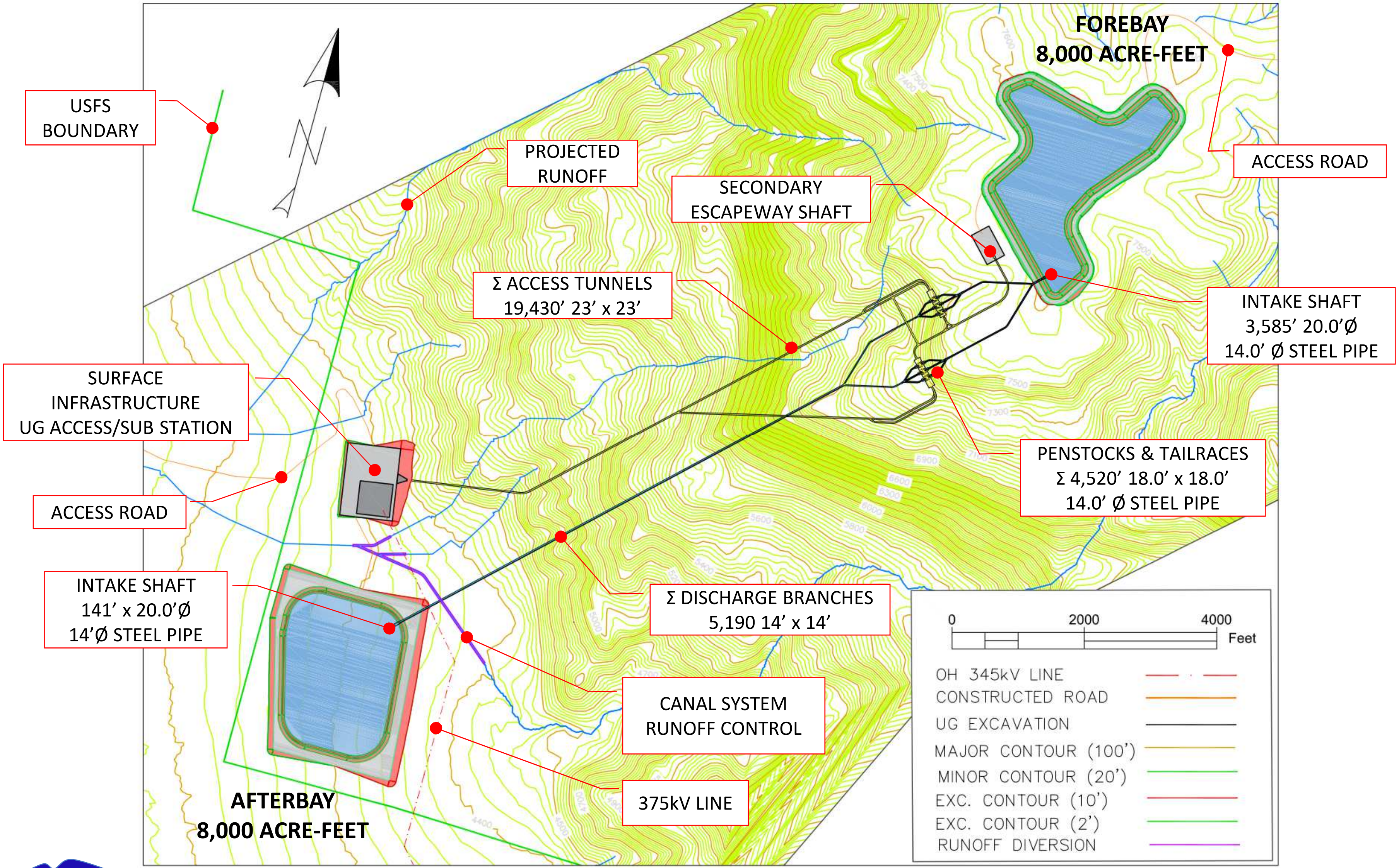


FIGURE: Ternary Pump Turbine Unit

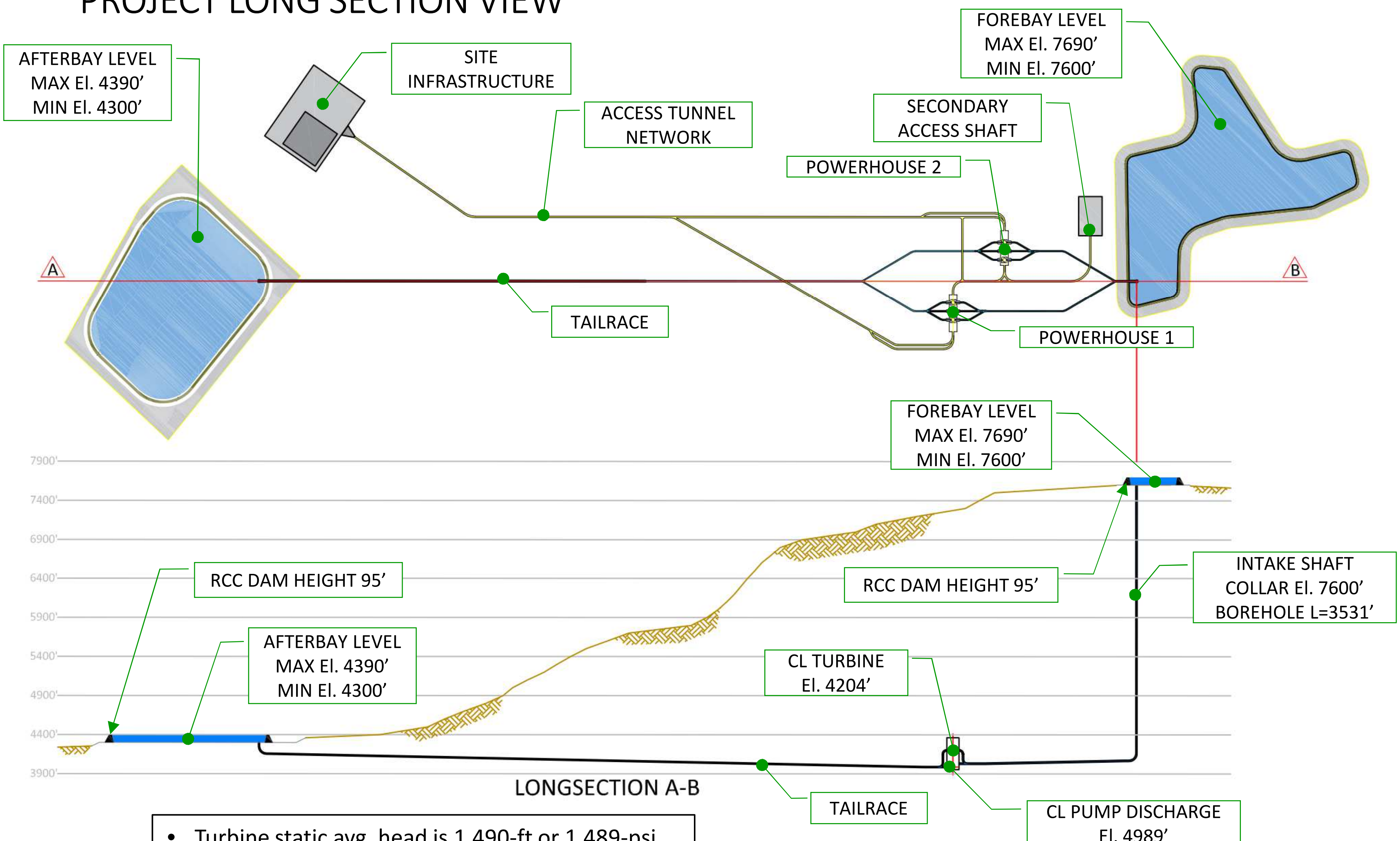
ESCONDIDO CANYON PROJECT

PROJECT PLAN DETAIL



ESCONDIDO CANYON PROJECT

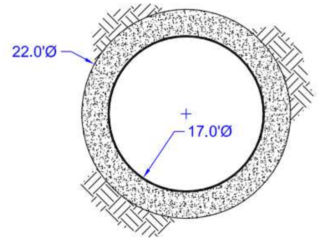
PROJECT LONG SECTION VIEW



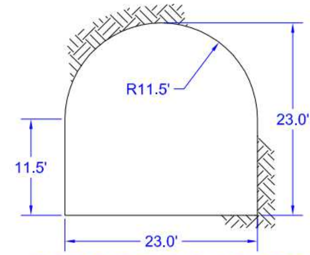
- Turbine static avg. head is 1,490-ft or 1,489-psi
- System RTE is 77%-80%.

GSLLC

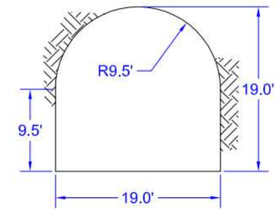
EXCAVATION DIMENSIONS



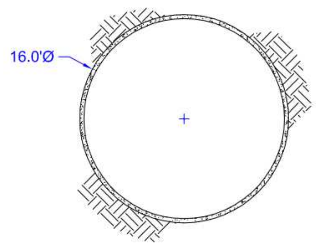
BOREHOLE WITH STEEL PIPE AND PERMEABLE CONCRETE (PC)



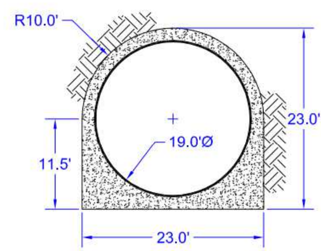
BARE ROCK ACCESS TUNNEL



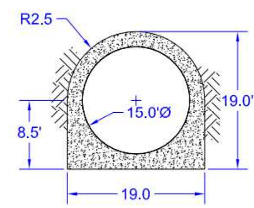
DISCHARGE WATER TUNNEL



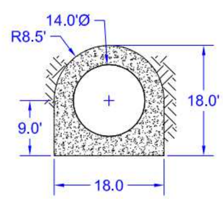
ACCESS SHAFT SHOTCRETE & BOLTS



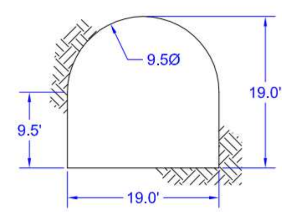
INTAKE TUNNEL SINGLE BRANCH STEEL PIPE & (PC)



INTAKE TUNNEL DOUBLE BRANCH STEEL PIPE & (PC)



PENSTOCKS STEEL PIPE & (PC)

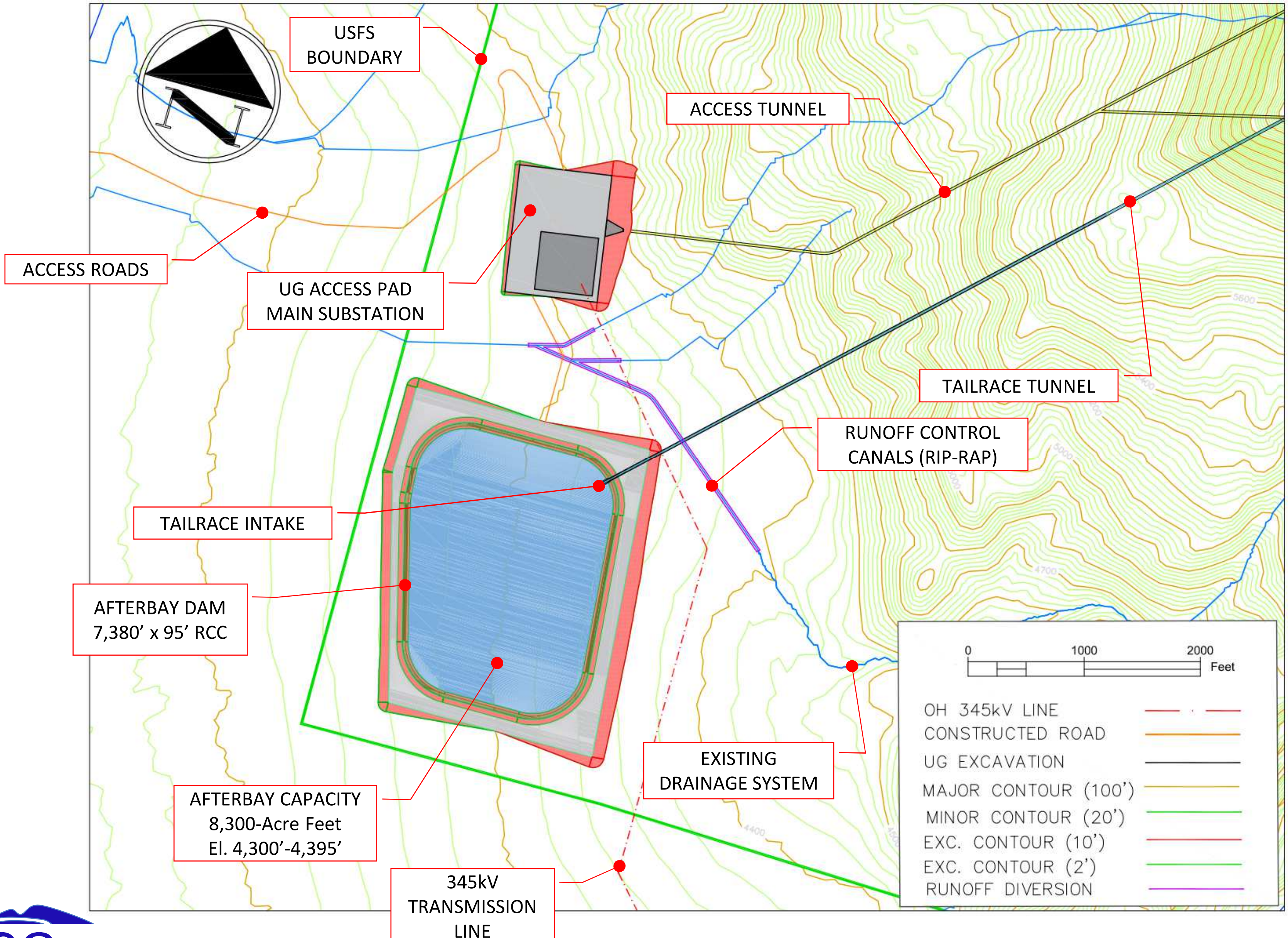


TAILRACE DISCHARGE TUNNEL

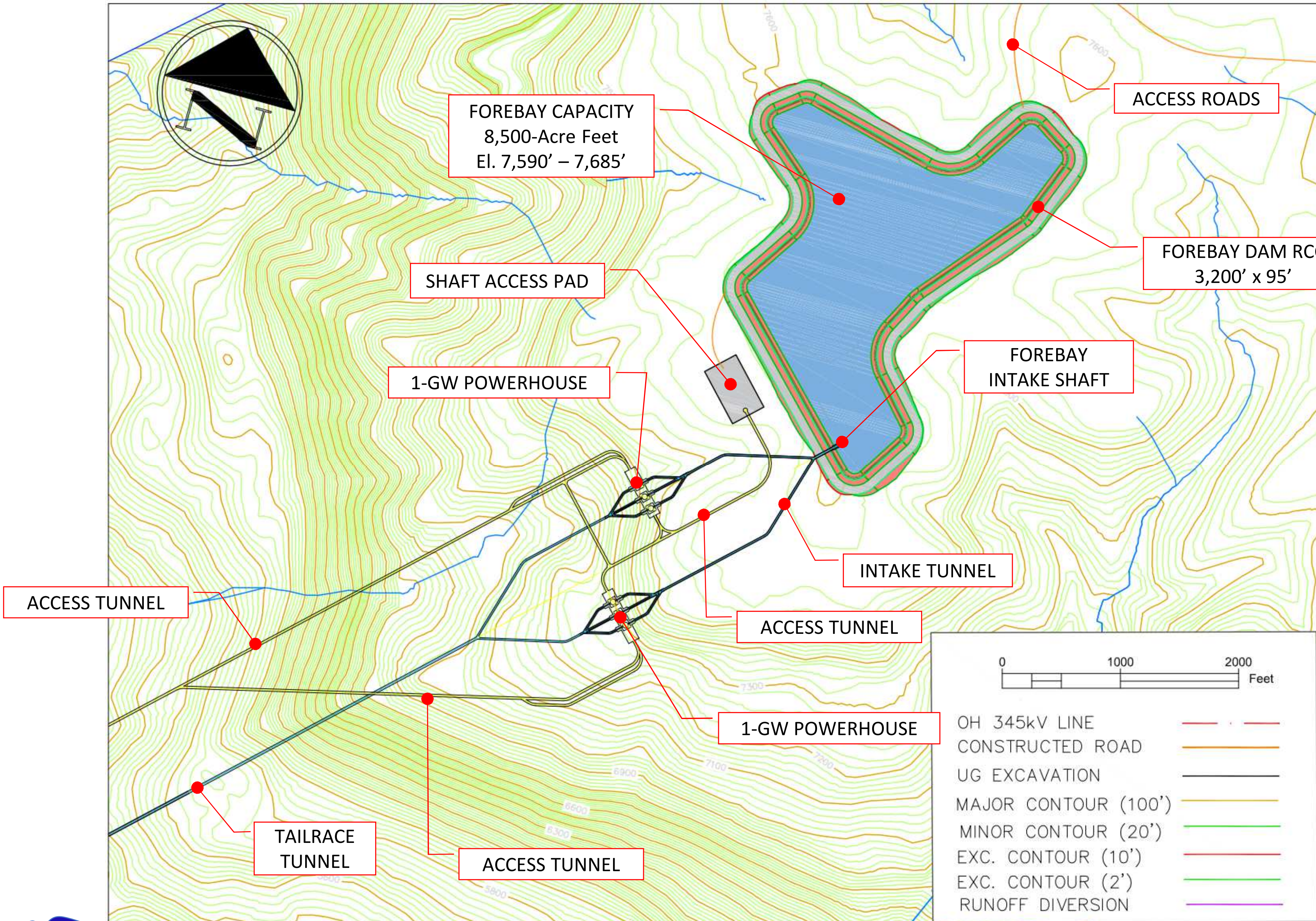
NOTE: All Dimensions are Imperial.

GSLLC

AFTERBAY


USFS BOUNDARY
ACCESS TUNNEL
ACCESS ROADS
UG ACCESS PAD MAIN SUBSTATION
TAILRACE TUNNEL
RUNOFF CONTROL CANALS (RIP-RAP)
TAILRACE INTAKE
AFTERBAY DAM 7,380' x 95' RCC
EXISTING DRAINAGE SYSTEM
AFTERBAY CAPACITY 8,300-Acre Feet El. 4,300'-4,395'
345kV TRANSMISSION LINE
0
1000
2000
Feet
OH 345kV LINE
CONSTRUCTED ROAD
UG EXCAVATION
MAJOR CONTOUR (100')
MINOR CONTOUR (20')
EXC. CONTOUR (10')
EXC. CONTOUR (2')
RUNOFF DIVERSION

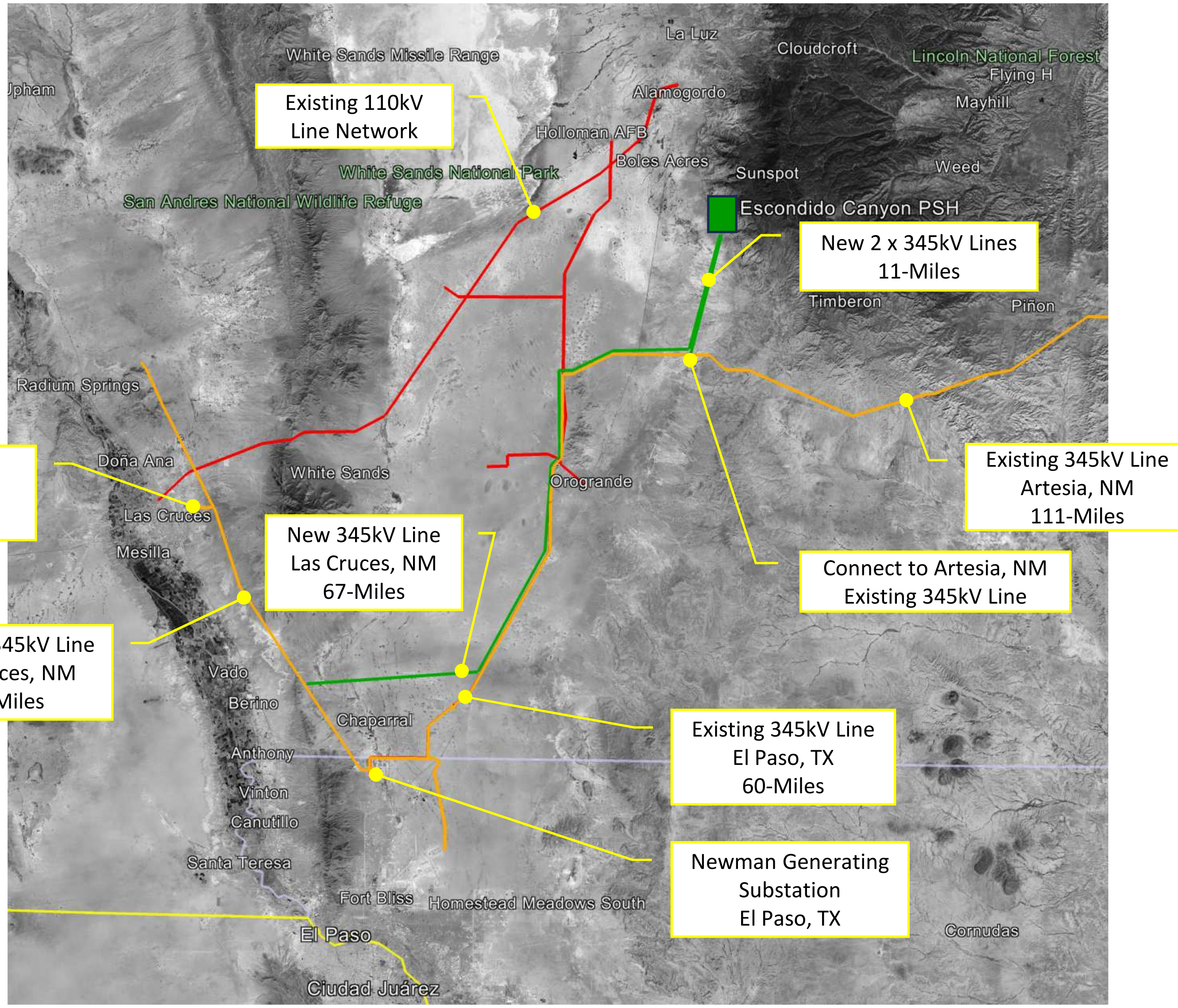
FOREBAY



FOREBAY CAPACITY
8,500-Acre Feet
El. 7,590' – 7,685'
ACCESS ROADS
FOREBAY DAM RCC
3,200' x 95'
SHAFT ACCESS PAD
FOREBAY
INTAKE SHAFT
1-GW POWERHOUSE
INTAKE TUNNEL
ACCESS TUNNEL
ACCESS TUNNEL
ACCESS TUNNEL
1-GW POWERHOUSE
TAILRACE
TUNNEL
ACCESS TUNNEL
0
1000
2000
Feet
OH 345kV LINE
CONSTRUCTED ROAD
UG EXCAVATION
MAJOR CONTOUR (100')
MINOR CONTOUR (20')
EXC. CONTOUR (10')
EXC. CONTOUR (2')
RUNOFF DIVERSION

ESCONDIDO CANYON PROJECT

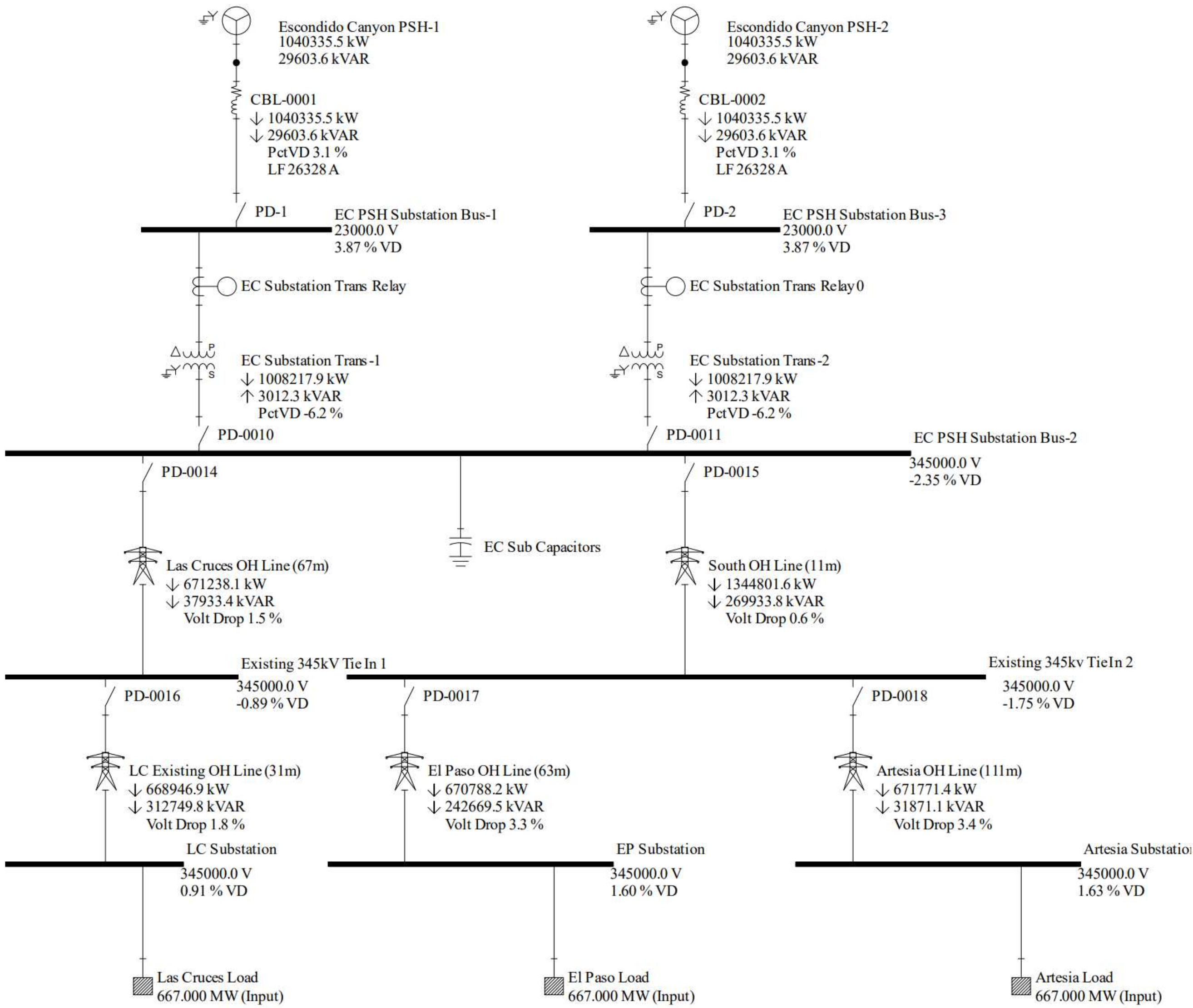
POSSIBLE TRANSMISSION LINE ROUTES



GS LLC

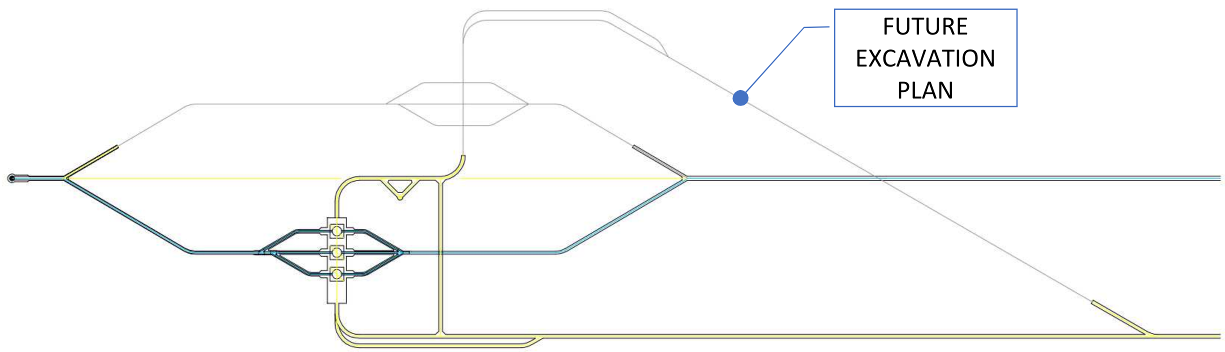
ESCONDIDO CANYON PROJECT

PRELIMINARY CONCEPT FOR ENERGY TRANSMISSION

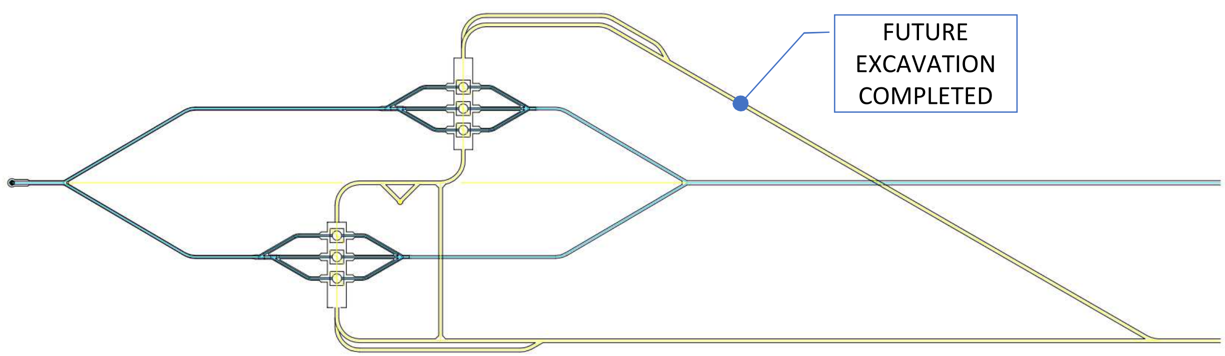


STAGED CONSTRUCTION

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.

WATER

SECURING WATER FOR THE CONSTRUCTION AND OPERATION OF THE PROJECT

ESCONDIDO 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 1,030 acre-feet. Evaporation and seepage of approximately 93 acre-feet annually are the only water losses that the project should suffer once the facility is in operation. The current plan for gaining the project's required water is to construct water wells in the alluvium at the afterbay site and run a pipe to the project's afterbay. Gravity Storage LLC will request water rights from the New Mexico state engineer to construct the required well field.

Floating solar on the reservoirs or other evaporation inhibiting devices will be investigated during the optimization planning of the project.

ESCONDIDO CANYON PSH WATER CONSERVATION

POSSIBLE CONSERVATION SOLUTIONS

ANNUAL AREA PRECIPITATION (Next Slide)

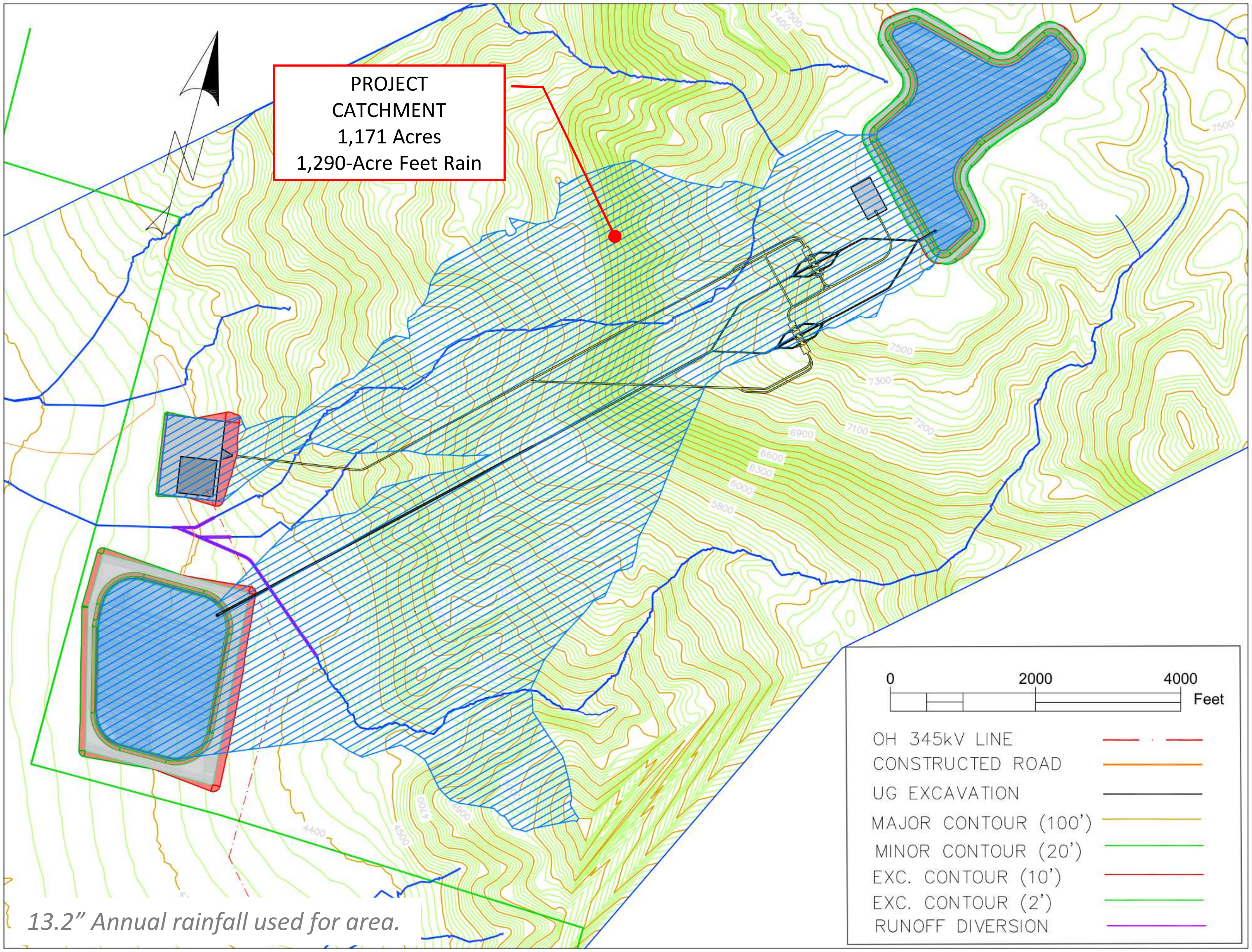
- The rain catchment area feeding the afterbay valley is 1,171-acres. The region typically gets 13.22-inches of rainfall annually, which translates into 1,290 acre-feet of water from rain.
- The projected evaporation and seepage is 754 acre-feet annually
- Storage of precipitation to replace evaporation losses will be investigated during the project optimization design.

FLOATING SOLAR PANELS ON THE RESERVOIRS

- Floating solar panels reduce the area of the reservoirs that contribute to water evaporation.
- The afterbay, as designed, can accommodate 15-MW of solar panels.
- The forebay, as designed, can accommodate 13-MW of solar panels.
- Solar panels will also reduce the projects energy demand during pumping.

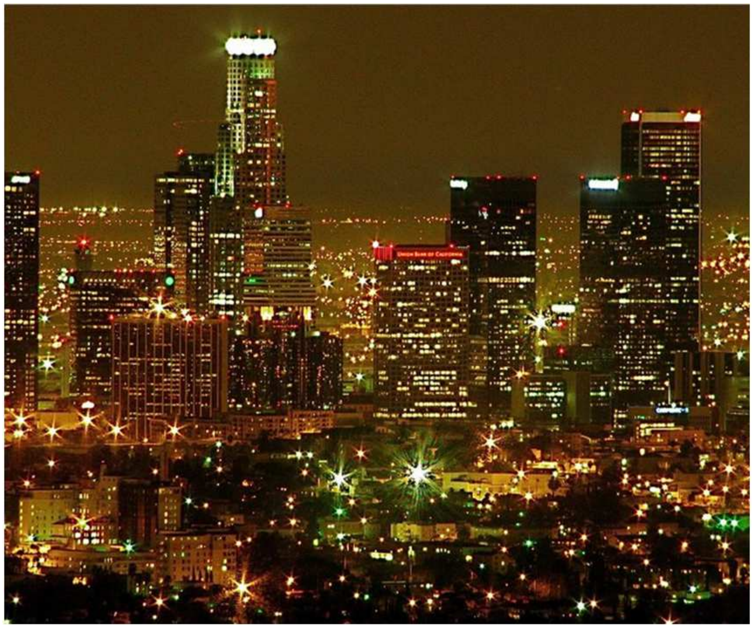
ESCONDIDO CANYON PSH WATER CONSERVATION

RAIN CATCHMENT AREA



PSH REVENUE

THE REVENUE STREAM ASSOCIATED WITH PUMPED STORAGE HYDRO UNITS



PROJECT REVENUE STRATEGY

The goal with marketing energy from the Escondido Canyon Pumped Storage Hydro project will be to secure a solid base load agreement with a utility connected to the El Paso Power Company grid 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.

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.

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.
- Four periods analyzed, end of: winter, summer, summer peak, and fall.
- At the completion of construction, the project should qualify for feed-in credits of $0.03/kWh.
- The preliminary economic result is a 13.5-percent IRR and an $NPV_{3\%}$ of $10,677M, 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.

INVESTMENT PLAN

THREE STAGES OF FUNDING ARE PROPOSED TO BRING THE PROJECT ONLINE

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

Tranche 1: Conduct scoping studies, EA/EIS Study, and complete all work to gain a FERC operating license and regulatory requirements outlined in the Alternative Licensing Process.

Tranche 2: Design optimization, utility discussions and transmission studies, site design, water permits, and secure required land for the project. Publish a pre-feasibility study.

Tranche 3: Geotechnical drilling and evaluation, hydrology studies, feasibility study, construction budget, construction design, equipment selection, and gain all construction related permits required by state and local governments.

Construction Funding: Construction activities completed, project commissioning, connection to the energy grid, initial filling of the reservoirs, and market agreements with utilities in-place.

GSLLC

ALTERNATIVE LICENSING PROCESS

FACILITATES AN ORDERLY AND EXPEDITIOUS REVIEW

- PRE-FILING
  - ↓ Applicant Forms. Communications Protocol. Consensus on Process
  - ↓ Request Use of Alternative Procedures
  - ↓ Commission Notice Comments, Commission Response
  - ↓ Applicant Files Notice of Intent and Pre-Application Document
  - ↓ Initial Information Meeting and Notices
  - ↓ Studies Conducted
  - ↓ Study Results
  - ↓ Additional Studies
  - ↓ PDE/DA Issued Preliminary Conditions

NEPA Scoping:
SD1 Issued
Scoping Meetings
Commission Notice

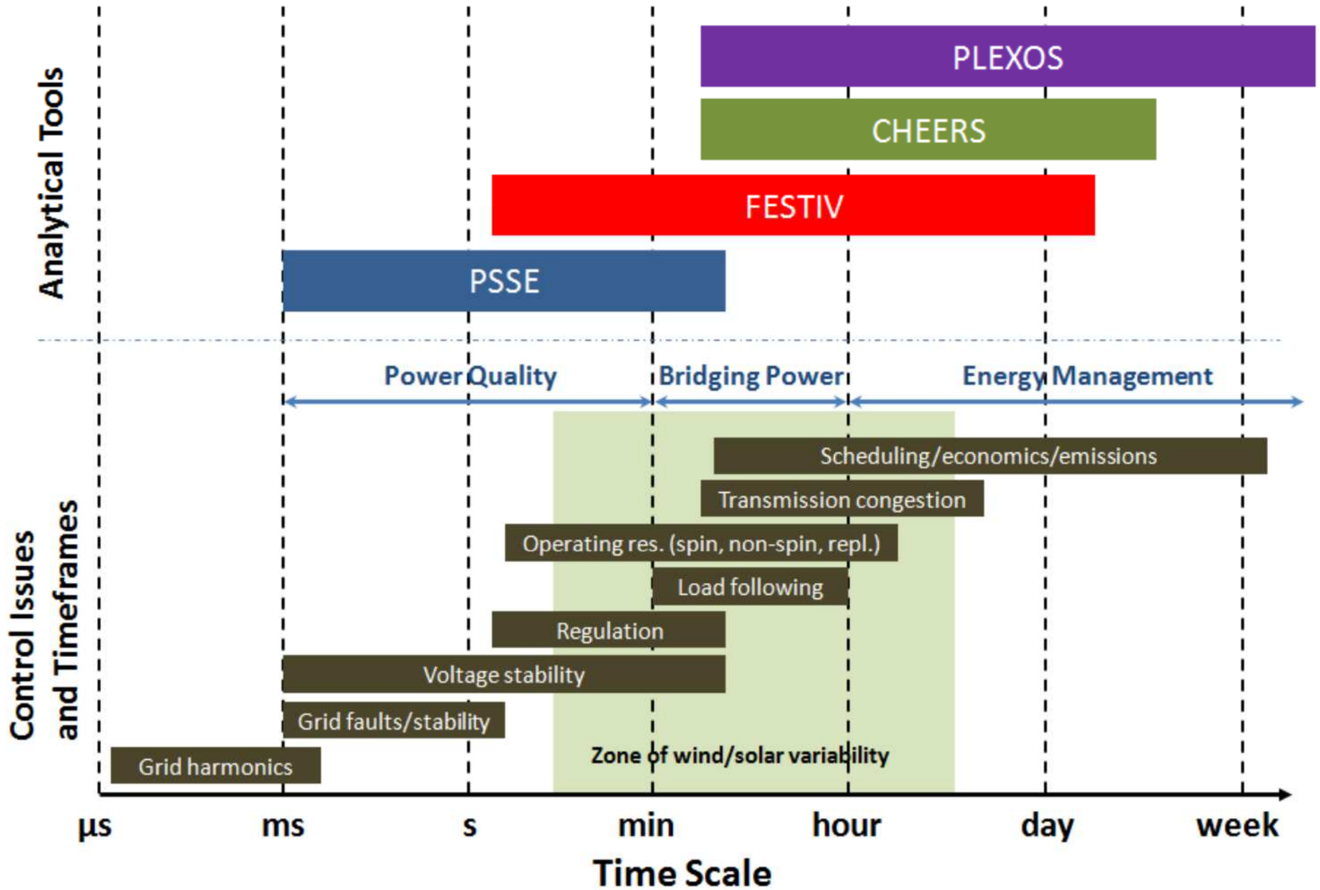
- POST-FILING
  - ↓ DEA Final Application Filed
  - ↓ Commission Notice, Tendering Acceptance, Interventions, Final Conditions
  - ↓ Commission Issues FEA Licensing Decision

GSLLC

STUDIES AND SIMULATIONS

UNDERSTANDING OF THE PROJECT'S POTENTIAL ENERGY CONTRIBUTION

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



NEXT STEPS

With Tranche 1 funding GSLLC intends to:

- Develop project milestones and schedule.
- Complete project base design and identify potential areas of optimization.
- Gain a FERC license for the project using the Alternative License Process:
  - Formation of Stakeholder Workgroups
  - Scoping Study using Project Base Design
  - Preliminary draft of an EA or EIS study
  - Address PDE/DA Issued Preliminary Conditions.
- Secure Tranche 2 financing.

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.
Texas A&M: Electrical Engineering Department

FURTHER INFORMATION

GRAVITY STORAGE LLC GROUP CONTACT INFORMATION

RICHARD GRESHAM
Gold Canyon, AZ
(928) 701-1689
rich@ramopps.com

DAVID DRIPS
Murray, UT
(385) 227-7272
dedrips@msn.com

ROBERTO FLORES
Mesa, AZ
(928) 200-3291
roberto@ramopps.com

Visit Us at https://gravitystoragellc.com/