

355 South Lemon Ave, Suite A Walnut, CA 91789 (909) 595-5314 Phone (909) 595-5394 Fax

May 19, 2019

Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, NE Washington, DC 20426

> Re: Premium Energy Holdings' Amendment No. 2 of the Application for Preliminary Permit for the Owens Valley Pumped Storage Project, FERC Project No. P-14984

Dear Secretary Bose:

Pursuant to 18 C.F.R. §§ 4.82 of the Federal Energy Regulatory Commission's ("FERC") regulations, enclosed for filing is Premium Energy Holdings, LLC's ("Premium Energy") Second Amendment to its Application for Preliminary Permit for the Owens Valley Pumped Storage Project under P-14984. This second amendment reflects the following changes:

- (1) Relocation of the project's proposed upper reservoirs. The new reservoirs would be in the White Mountains Range in the Inyo county, in lieu of the Wheeler Ridge.
- (2) Relocation of the project's proposed pressure tunnels, underground powerhouses, switchyards and transmission lines.
- (3) The project's ratings are changed to support power generation at 1,600 MW for the first power plant, 800 MW for the second power plant, and 2,400 MW for the third power plant. The total power generation capacity of the Owens Valley Pumped Storage Project would be 4,800 MW.

The required amendment in the application is requested in order to avoid the potential environmental conflict due to the alteration of the John Muir Wilderness. If you have any questions or require additional information regarding this submittal, please contact me at (909) 595-5314 or email me at victor.rojas@pehllc.net.

Sincerely, Victor M. Rojas

Managing Director at Premium Energy Holdings, LLC

Enclosures cc:

# BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

# SECOND AMENDED APPLICATION FOR PRELIMINARY PERMIT OF THE OWENS VALLEY PUMPED STORAGE PROJECT

FERC Project No. P-14984

Prepared by

# **Premium Energy Holdings, LLC**

May 19, 2019

# TABLE OF CONTENTS

NITIAL STATEMENT	1
VERIFICATION STATEMENT	6
EXHIBIT 1 – DESCRIPTION OF THE PROPOSED PROJECT	7
EXHIBIT 2 – DESCRIPTION OF THE PROPOSED STUDIES	. 20
EXHIBIT 3 – OWENS VALLEY PUMPED STORAGE PROJECT MAP	. 23

### **INITIAL STATEMENT**

### BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

### **Second Amended Application for Preliminary Permit**

#### for the Owens Valley Pumped Storage Project

Premium Energy Holdings, LLC ("Premium Energy"), a California based limited liability corporation, applies to the Federal Energy Regulatory Commission for a preliminary permit for the Owens Valley Pumped Storage Project, as described in the attached exhibits. This application is made in order that the applicant may secure and maintain priority of application for a license for the project under Part I of the Federal Power Act while obtaining the data and performing the acts required to determine the feasibility of the project and to support an application for a license.

1. The location of the proposed project is:

State or territory:	California
Counties:	Mono County, Inyo County
Township or nearby town:	Bishop
Streams:	Owens River, Silver Creek, Gunter Creek

2. The exact name, business address, and telephone number of the applicant are:

Premium Energy Holdings, LLC 355 South Lemon Ave, Suite A Walnut, CA 91789 Telephone: (909) 595-5314

3. The name, business address, and telephone number of the persons authorized to act as agent for the applicant in this application are:

Victor M. Rojas Managing Director at Premium Energy Holdings, LLC 355 South Lemon Ave, Suite A Walnut, CA 91789 Telephone: (909) 595-5314 Email: victor.rojas@pehllc.net

Maria Hernandez Project Manager at Premium Energy Holdings, LLC 355 South Lemon Ave, Suite A Walnut, CA 91789 Telephone: (909) 595-5314 Email: maria.hernandez@pehllc.net

- 4. Preference under Section 7(a) of the Federal Power Act
- 5. Premium Energy is a corporation operating in California and is not claiming preference under section 7(a) of the Federal Power Act. Premium Energy's business primarily involves the retrofit and modernization of pumping plants, transmission planning and design, power system studies, testing and commissioning of power plants and substations.
- 6. Term of Permit:

The proposed term of the requested permit is twenty-four (24) months.

7. Existing Dams or Other Project Facilities:

The proposed project would make use of the waters within the Owens Lake Watershed, specifically the Owens River waters. However, once the proposed reservoirs are filled, the project would operate in a closed loop and would not divert water from the Owens River or the existing streams. No existing dams or other project facilities will be part of the Owens Valley Pumped Storage Project.

### ADDITIONAL INFORMATION REQUIRED BY 18 C.F.R. § 4.32(a)

1. Identification of persons, associations, domestic corporations, municipalities, or state that has or intends to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the project:

Premium Energy Holdings, LLC 355 South Lemon Ave, Suite A Walnut, CA 91789 Telephone: (909) 595-5314

- 2. Identify (names and mailing addresses):
  - i. Every county in which any part of the project, and any Federal facilities that would be used by the project, would be located.

Mono County, California Board of Supervisors 278 Main Street BridgePort, CA 93517 Telephone: (866) 745-9719

Inyo County, California Board of Supervisors 224 N Edwards Street Independence, CA 93526 Telephone: (760) 878-0373

- ii. Every city, town or similar local political subdivision:
  - (A) In which any part of the project, and any Federal facilities that would be used by the project, would be located:

None.

(B) That has a population of 5,000 or more people and is located within 15 miles of the project dam:

None.

- iii. Every irrigation district, drainage district, or similar special purpose political subdivision:
  - (A) In which any part of the project, and any Federal facilities that would be used by the project, would be located:

Los Angeles Department of Water and Power 111 N Hope Street Los Angeles, CA 90012 Telephone: (800) 499-8840 (B) That owns, operates, maintains, or uses any project facilities or any Federal facilities that would be used by the project:

None.

iv. Every other political subdivision in the general area of the project that there is reason to believe would likely be interested in, or affected by, the application; and interest:

California Department of Water Resources P.O. Box 942836 1416 9th Street Sacramento, CA 95814

State Water Resources Control Board 1001 I Street P.O. Box 100 Sacramento, CA 95814

California Department of Fish and Game Inland Deserts Region 3602 Inland Empire Boulevard Suite C-220 Ontario, CA 91764

Inyo County Water Department P.O. Box 337 135 South Jackson St. Independence, CA 93526

California Department of Transportation (Caltrans) 1120 N Street Sacramento, CA 95814 Telephone: (916) 654-2852

v. All Indian tribes that may be affected by the project:

Chairperson Bishop Paiute Tribe of the Owens Valley 50 Tu Su Lane Bishop, CA 93514 Telephone: (760) 873-3584 Chairperson Big Pine Paiute Tribe of the Owens Valley P.O. Box 700 Big Pine, CA 93513 Telephone: (760) 938-2003

Chairperson Lone Pine Paiute Shoshone Reservation P.O. Box 747 Lone Pine, CA 93545 Telephone: (760) 8761034

Chairperson Fort Independence Reservation P.O. Box 67 Independence, CA 93526 Telephone: (760) 878-5160

# 20190520-5041 FERC PDF (Unofficial) 5/20/2019 10:18:27 AM VERIFICATION STATEMENT

This application for a preliminary permit for the proposed Owens Valley Pumped Storage Project is executed in the state of California, county of Los Angeles.

By: Victor M. Rojas Premium Energy Holdings, LLC 355 South Lemon Ave, Suite A Walnut, CA 91789

Being duly sworn, deposes, and says that the contents of this application for a preliminary permit are true to the best of his knowledge or belief. The undersigned applicant has signed the application on this 19th day of May of 2019.

Victor M. Rojas Managing Director at Premium Energy Holdings, LLC

Subscribed and sworn before me, a Notary Public of the State of California, County of Los Angeles, this day of May 19, 2019.

NOTARY PUBLIC



### **EXHIBIT 1 – DESCRIPTION OF THE PROPOSED PROJECT**

### 1. GENERAL CONFIGURATION

The proposed Owens Valley Pumped Storage Project would be located 5 miles away from Bishop, California. Its facilities would be between the Southern Mono County and Northern Inyo County. Communities within the project's influence area include Wilkerson, Round Valley, Mesa, Rovana, Forty Acres, Sunny Slopes, Small Meadows, Paradise, Tom's Place, Aspen Springs and Crowley Lake.

The project concept envisions the construction of three pumped storage generating facilities. The project would be constructed in three successive stages for each pumped storage power plant. The project's stage 1 would introduce a 1,600 MW pumped storage power plant. Succeeding the completion of stage 1, a second 800 MW pumped storage power plant would be constructed during the project's stage 2. Finally, the project's stage 3 proposes the construction of a third pumped storage power plant with rated capacity at 2,400 MW.

The three power plants would operate as closed loop hydro-power pumped storage plants. The project's operation would not alter the existing streaming beds. Once the proposed reservoirs are filled with enough stored water for project operation, water will not be diverted from the upstream Owens River or Lake Crowley.

The three pumped storage power plants would employ new upper reservoirs created in the White Mountains Range in the Inyo county. The project's lower reservoirs would be created in the Owens River Gorge. Each of the project's new reservoirs would require the construction of a new embankment for them to be filled and interconnecting hydraulic pressure tunnels. The embankments for the project's proposed reservoirs would consist of roller compacted concrete dams. Conceptual dimensions for the project's dams and tunnels are detailed in tables 1 and 2, respectively.

Description	Reservoir	Dam Crest Elev. [ft]	Dam Height [ft]	Dam Length at Crest [ft]
irs	White Mountains Reservoir 1	8,355	655	2,570
Jpper	White Mountains Reservoir 2	7,715	555	1,690
White Mountains Reservoir 3		8,855	545	1,400
r irs	Owens River Gorge Reservoir 1	4,895	375	990
owei	Owens River Gorge Reservoir 2	5,835	490	1,340
Re	Owens River Gorge Reservoir 3	6,455	375	1,290

Table 1. New Reservoirs' Embankment Dimensions

Upper Reservoir	Lower Reservoir	Head [ft]	Tunnel Diameter [ft]	Tunnel Length [mi]
White Mountains Reservoir 1	Owens River Gorge Reservoir 1	3,460	28	19.5
White Mountains Reservoir 2	Owens River Gorge Reservoir 2	1,880	22	20.8
White Mountains Reservoir 3	Owens River Gorge Reservoir 3	2,400	27	22.0

 Table 2. Pressure Tunnels Dimensions

The proposed power plants are proposed to be cavern-type powerhouses located underground. The powerhouses would be located about a mile away from the proposed lower reservoirs shore. Each underground powerhouse would have an access tunnel, and would be connected to a headrace pressure tunnel, and a tailrace pressure tunnel. Hence, the project's main features will be located underground and will not alter the existing landscape or cause environmental disturbances. Aside from the proposed reservoirs and electrical transmission, the project's facilities will be out of public sight.

Each of the project's stages will require the construction of the new upper and lower reservoirs, pressure tunnels, underground generating/pumping powerhouses, electrical switchyards, and interconnecting transmission lines. The final combined pumped storage power plants would deliver a total of 4,800 MW through 500 kV transmission lines. The project's transmission lines would interconnect with Los Angeles Department of Water and Power (LADWP) AC or DC transmission system to deliver the generated power. An additional interconnection with SCE's Windhub Substation would facilitate the exchange of renewable energy with SCE as well as with other municipal utilities in southern California. Upgrades to existing transmission lines and substations would be necessary to deliver the electrical power to the existing high-voltage regional transmission system.

# 2. <u>RESERVOIRS</u>

The upper and lower reservoirs configuration is to be the best suited to maximize the available hydraulic head, as well as minimize the pressure tunnels layout within environmental constraints. The proposed reservoir sites within this application are the result of conceptual engineering completed by Premium Energy and its consultants. During the term of the preliminary permit, Premium Energy will further investigate on the new reservoirs configuration and select the best suited location for energy, economic and environmental considerations.

The project concept includes a new White Mountains reservoir serving as upper reservoir for each of the three pumped storage power plants. A new reservoir in the Owens River Gorge will serve as the lower reservoir for each power plant. A hydraulic head of up to 3,460 ft would exist between the new reservoirs, which would be exploited for hydro power generation.

## A. Upper Reservoirs Configuration

The project's three pumped storage power plants will employ new reservoirs in the White Mountains as upper reservoirs. The new White Mountains reservoirs' physical characteristics are detailed in table 3.

Table 3. Upper Reservoirs Characteristics							
Reservoir	Surface Area [acre]	Storage Capacity [acre-ft]	Maximum Surface Elevation [ft]				
White Mountains Reservoir 1	100	22,870	8,340				
White Mountains Reservoir 2	70	13,810	7,700				
White Mountains Reservoir 3	130	21,390	8,840				

To enable pumped storage operation, the new reservoirs will have intake-outlet structures with a submerged intake elevation at an adequate height. Below this elevation, a permanent reserve of water will remain in the reservoirs. From the intake-outlet structures, the head race pressure tunnels will unfold to connect the new White Mountains reservoirs to the powerhouses located underground near the new Owens River Gorge reservoirs.

The new White Mountains reservoirs site naturally discharges runoff to streams reaching the Owens River. During high water level season, excess water from the White Mountains Reservoir 1 and 2 would be discharged to the Silver Creek. White Mountains Reservoir 3 would discharge to the Gunter Creek. These creeks join the Owens River downstream.

# B. Lower Reservoirs Configuration

The project proposes the new lower reservoirs to be created in the Owens River Gorge. The new lower reservoirs physical characteristics are detailed in tables 4 and 5. The Owens River currently supplies water for the L.A. Aqueduct System, which delivers water from the Owens River to Los Angeles. However, the project's pumped storage power plants will operate in a closed loop. Therefore, operation will reuse the water in a cyclic manner and will not divert water from the upstream water sources. The project's new reservoirs will provide enough water storage capacity for 12 hours of continuous output, with a backup reserve to generate power for up to 24 hours.

Reservoir	Surface Area [acre]	Storage Capacity [acre-ft]	Maximum Surface Elevation [ft]
Owens River Gorge Reservoir 1	190	23,530	4,880
Owens River Gorge Reservoir 2	75	12,660	5,820

Table 4. Lower Reservoirs Characteristics

Owens River Gorge Reservoir 3	155	19,610	6,440
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### 3. TRANSMISSION LINES

The Project proposes three interconnection alternatives with the regional electric utility network:

- Transmission alternative 1 interconnects the project to LADWP's Owens Gorge Substations. The power is then transmitted through upgraded LADWP's 500 kV AC transmission lines to a new Sylmar AC Switchyard.
- Transmission alternative 2 will deliver the power to Sylmar Converter Station making use of a section of the existing PDCI. The interconnection would require one of the following upgrade options for the existing PDCI segment going from Owens Valley to Sylmar Converter Station:
  - Upgrade the existing PDCI poles to a 4+ conductor bundle per pole with reinforced electrical towers.
  - Addition of a second DC circuit in the same PDCI segment with modified electrical towers to support two independent circuits.

This alternative would also require the construction of a new converter station east of the Lower Owens Gorge and a new converter station in a rebuilt Sylmar West Converter Station.

• A third transmission alternative follows the same configuration of transmission alternative 2, except it will not make use of the PDCI corridor. Instead, this alternative would employ underwater HVDC cables going on the L.A. Aqueduct.

In order to harness and store excess renewable energy, the project proposes interconnection with Southern California Edison's (SCE) TRTP Windhub Substation for all transmission alternatives. Transmission alternative 1 would require a new 500 kV mid-point substation to interconnect with SCE's Windhub substation. On the other hand, a new converter station near Windhub Substation would be required for transmission alternatives 2 and 3. This new converter station would allow for the interconnection of HVDC electrical power to the AC Windhub substation for the project's operation.

Further studies of the project's transmission lines location, voltage, number of circuits, and interconnection alternatives will be carried out during the term of this preliminary permit, to select the most preferable alternative. The interconnection voltage may be 230 or 500 kV, AC or DC, depending upon the results of studies to be carried out. In case the project uses 500 kV transmission lines, the upgrade of subsequent transmission lines and involved substations will be necessary.

# 4. <u>PROJECT CAPACITY</u>

The project is proposed to store excess renewable energy, helping to integrate renewables onto the grid, and to supply firm peaking power generation with primary load following capability. Based on preliminary analysis, the planned total installed capacity of the three pumped storage power plants would be 4,800 MW. However, the project's rating may change as studies proceed. Premium Energy also plans to conduct

transmission system studies and power market investigations to help further refine the range of suitable generation capabilities.

Assuming a plant capacity factor of 40%, the Owens Valley Pumped Storage Plant #1, rated at 1,600 MW, will produce a total of 5,530 GWh of annual energy production. The Owens Valley Pumped Storage Plant #2, rated at 800 MW, will have an annual energy production of 2,760 GWh. Finally, the Owens Valley Pumped Storage Plant #3 with a rating of 2,400 MW, will have an 8,290 GWh annual energy production. The three closed-loop pumped-storage power plants involved in this project would have a total combined annual energy production of 16,580 GWh.

On a preliminary basis, the maximum gross head may be up to 3,460 feet depending on the reservoirs' location. At the present time, the project concept envisions procurement of four new pump-turbine generator-motor sets for the first pumped storage power plant. Two new units would be required for the second pumped storage power plant, and six new units for the third pumped storage power plant. Each unit would have a nominal rating at 400 MW.

## 5. FEDERAL LANDS

The project study boundary, as shown on Exhibit 3, encompasses part of the Inyo National Forest, the Bureau of Land Management California lands and City land belonging to either the Los Angeles Department of Water and Power (LADWP) or private owners. The project's new White Mountains reservoirs would be in the eastern section of the Inyo National Forest, managed by the U.S. Forest Service. The proposed hydro power pressure tunnels would mostly go through part of the Inyo National Forest and the Bureau of Land Management lands. The lower reservoirs would be created in the Owens River Gorge, which is currently owned by LADWP.

The interconnection of the project will require new transmission lines in the Owens Valley to interconnect the project's power plants to either the Control Gorge Substation or a new converter station west of the lower Owens Gorge. This new transmission corridor will occupy the Bureau of Land Management lands to interconnect the proposed Owens Pumped Storage Power Plant #1 and # 2. The Owens Pumped Storage Power Plant #3 will require a new transmission corridor going through BLM lands and part of the Forest Service lands. After this new transmission lines, the subsequent existing transmission lines and substations that will be upgraded are in Los Angeles Department of Water and Power lands. These lands correspond to either the subsequent 230 kV AC transmission lines corridor, the PDCI corridor, or the L.A. Aqueduct corridor; for transmission alternatives 1, 2, and 3, respectively.

#### LAND DESCRIPTION

#### Public Land States (Rectangular Survey System Lands)

1. STATE	CALIFORN	IA	2. FER	C PROJECT NO	P-14984
3. TOWNSHIP	4S	RANG	E <u>30E</u>	MERIDIAN	Mount Diablo
4. Chec	k one:			Check one:	
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19	20	21	22	23	24
30	29	28	27	26	<b>25</b> Exhibit 3
31	32	33	34	35	<b>36</b> Exhibit 3

6. Contact's name Victor M. Rojas

Telephone no. ( 909-595-5314 )

Date submitted <u>May 19, 2019</u>

#### LAND DESCRIPTION

#### Public Land States (Rectangular Survey System Lands)

1. STATE	CALIFORN	IA	2. FER	C PROJECT NO	<u>.</u> P-14984
3. TOWNSHIP	4S	RANG	E <u>31E</u>		Mount Diablo
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Pending

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If preliminary permit is issued, give expiration date: <u>Not applicable</u>

5. EXHIBIT SHEET NUMBERS OR LETTERS					
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Exhibit 3	Exhibit 3	Exhibit 3	Exhibit 3	Exhibit 3	Exhibit 3
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1. STATE	CALIFORNIA		2. FERC	PROJECT NO. <u>P-14984</u>	
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<u>License</u> <u>X</u>Preliminary Permit

If preliminary permit is issued, give expiration date: <u>Not applicable</u>

5. EXHIBIT SHEET NUMBERS OR LETTERS					
Section 6	5	4	3	2	1
Exhibit 3	Exhibit 3	Exhibit 3	Exhibit 3	Exhibit 3	
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## **EXHIBIT 2 – DESCRIPTION OF THE PROPOSED STUDIES**

### 1. <u>GENERAL REQUIREMENT</u>

Premium Energy proposes to carry out an exhaustive feasibility study to evaluate the proposed reservoirs layout alternatives, as well as the power transmission alternatives. The primary aspects to be studied are the geological, environmental and water resources, and electrical engineering of the project. The studies will also include the economic viability and financing of the project. The complete feasibility study will include:

- Project site land surveys.
- Geological and seismic investigations.
- Soil surveys, test pits, core holes and topographical surveying.
- Hydrological studies including runoff, rain, evaporation and groundwater flow.
- Evaluation of reservoirs configuration alternative.
- Devising of the project water supply plan, including legal and water rights matters.
- Environmental and cultural impact study comprising environmental surveys, impact identification, evaluation and mitigation measures.
- Engineering studies to optimize the project's physical configuration.
- Energy market studies and determining preliminary power sales and supply expectations.
- Evaluation of transmission interconnection alternatives including electrical system impact studies.
- Determination of size and specifications of the required equipment.
- Cost estimates, economic feasibility and financing options investigation.

Based on the results and findings of the initial stages of the feasibility study, the applicant will prepare a Notice of Intent and Pre-Application Document as detailed in 18 C.F.R. §§5.5 and 5.6.

Temporary access roads will be required to reach the project's new reservoirs site and perform the required studies. The proposed temporary access roads would start from the existing Owens Gorge Road and lead to each of the proposed Owens River Gorge Reservoirs site. The White Mountains Reservoirs site would be reached through temporary access roads starting from either the existing Gunter Road or the existing Silver Canyon Road.

Additionally, access roads leading to the new substation site to interconnect Windhub Substation will be required for transmission alternative 1. Likewise, access roads to the proposed converter stations site will be required for transmission alternatives 2 and 3.

### 2. WORK PLAN FOR NEW DAMS CONSTRUCTION

The new dams' construction will require subsurface investigations at the White Mountains Range, as well as the Owens River Gorge. The investigations will be carried out at the proposed reservoirs site, as depicted in exhibit 3. Soil and rock borings will be necessary to determine the rock/soil structure and stability for the proposed dams and power plants foundations. Soil and rock samples shall be extracted to conduct studies and determine the soil mechanical properties. Therefore, assessing the project site's suitability for construction of the new dams. Furthermore, seismic surveys will also be required to ensure reliability of the proposed dams and the safety of the surrounding communities.

The schedule of activities will be completed by the applicant during the permit period as shown in the table below:

Schedule	Activity
Beginning in Month 1 to the end of Month 4	Conceptual engineering and evaluation of the alternative reservoir configurations
Beginning in Month 1 to the end of Month 6	Initial scoping and consultation
Beginning in Month 5 to the end of Month 10	Geotechnical and hydrological studies
Beginning in Month 7 to the end of Month 12	Soil and topographical surveying
Beginning in Month 1 to the end of Month 16	Environmental and cultural impact study
Beginning in Month 1 to the end of Month 14	Engineering studies to optimize the project's physical configuration
Beginning in Month 4 to the end of Month 16	Planning and evaluation of transmission interconnection alternatives
Beginning in Month 1 to the end of Month 12	Devising of water supply plan
Beginning in Month 12 to the end of Month 18	Legal and water rights matters
Beginning in Month 14 to the end of Month 24	Determination of size and specifications of the required equipment
Beginning in Month 10 to the end of Month 16	Energy market evaluation
Beginning in Month 6 to the end of Month 16	Cost estimating, economic feasibility & financial planning investigation
Beginning in Month 10 to the end of Month 16	Preliminary licensing proposal, consultation, and documentation
Beginning in Month 16 to the end of Month 24	Preparation, review and filing of the FERC license application

Table 5. Schedule of Activities

The schedule of activities may deviate from its initial formulation. Activities may be adjusted or supplemented depending upon circumstances which may develop as the studies proceed. Remedial actions to the possible disturbance of the proposed studies include the implementation of an erosion and material disposal plan, backfilling of core borings and test pits and replanting any disturbed vegetation.

## 3. STATEMENT OF COSTS AND FINANCING

The total estimated cost of carrying out or preparing the studies, investigations, tests, surveys, maps, plans or specifications described above is \$5 Million.

The expected sources of financing available to carry out the activities of the described feasibility study are:

- Premium Energy's available funds.
- Balance raising through investors.

The proposed market for the energy storage and production covers the electric markets in California. Power purchasing entities and other potential off-takers will be identified in further investigations during the term of the preliminary permit.

## **EXHIBIT 3 – OWENS VALLEY PUMPED STORAGE PROJECT MAP**



# **Owens Valley Pumped Storage Project Study Area Boundary**

# **Project's Typical Section View**



# **Owens Valley Pumped Storage Project Study Area Boundary**



### **Transmission Alternative 1 (AC)**

# **Owens Valley Pumped Storage Project Study Area Boundary**



# **Transmission Alternative 2 (Overhead DC)**

# **Owens Valley Pumped Storage Project Study Area Boundary**



Transmission Alternative 3 (L.A. Aqueduct Underwater DC Cable)

20190520-5041 FERC PDF (Unofficial) 5/20/2019 10:18:27 AM Document Content(s) Owens PSP Preliminary Permit Application - Amendment 2 .PDF.....1-29