



Puerto Rico Technology Complex (PROTech) RFQ Questions & Answers

- 1. Does the soil and geology of the proposed site allow for the use of tunnel pipes for the cold seawater supply of the OTEC plant instead of the seafloor mounted pipes?**

Soil and geology studies have not been requested nor completed at this point. These will be a responsibility of the selected developer/entity for the project via RFP. Tunneling the pipes as an alternative from the shore might be evaluated as part of the engineering, design, environmental studies, licensing and permitting phase of the project.

- 2. A feasible study conducted by the Company in 1997 for a 35MW facility suggests as the best site, a site approximately 2km south of the proposed site. Can an alternative site be used for the project or the proposed site is mandatory?**

The development of the RFQ was preceded by multiple analyses which gauged the feasibility of multiple sites in the region, thus, other sites were considered. The proposed site is the result of an empirical analysis which considered several physical, legal, technical, environmental and economic factors in order to determine the optimal location. Proponents are advised to submit proposals limited to the site outlined in the RFQ.



3. At what Phase of the project will the PPA with the PREPA and the WPA with PRASA will be available? What are the estimated expected rates for renewable energy projects?

The company in charge of energy generation is the one that usually meets directly with PREPA, so it will be the responsibility of the selected proponent to coordinate this. Rates need to be negotiated with PREPA. After having a schematic design that provides a clear understanding of the energy generation, the project should be submitted to the Permits Management Office (OGPe), part of the Department of Economic Development and Commerce. The required documents from OGPe are mostly the same documentation needed to negotiate rates with PREPA and PRASA. The PREPA PPA with LUMA has been signed and will be operational in 2021. The PRASA WPA is in process but should be completed by 2021 and would be operational in 2022. On the other hand, the proposed size of the pilot/R&D plant is 500 kW. The selected developer/entity should evaluate use of power generated by OTEC plant for the PROTECH park consumption and/or private organizations, in addition to evaluating selling to PREPA via a PPA. Same as for the water to be produced (for the park and private organizations, in addition to PRASA).

4. Who will be responsible for the potable water lines and connections with the project? PRASA or the Developer?

The Puerto Rico Aqueducts and Sewers Authority (PRASA) will confirm the connection point outside of the area/development. The developer will be responsible for connection within the area/development.

5. What will the PREPA charges for having power backup for the project in case of emergencies?

PREPA will charge commercial fees and will probably install meters. Commercial rate varies in price based on location. Additionally, it will depend on the final engineering/design for the project (i.e. the park might operate on "island-mode" and not connecting to PREPA; or PREPA could be a primary or secondary back-up, etc.).



6. Are there insurance facilities available for the project in Puerto Rico?

Puerto Rico's insurance market provides for multiple products which are regulated by the Insurance Commissioner's Office. If by insurance facilities the question refers to the availability of insurance for the Project, the answer is that they are available as in any U.S. market. If it refers to whether the Government will create a separate insurance facility for the project, such expectation is highly unlikely. Insurance options typical for this type of development are available via local firms. It will be the developer's responsibility to procure the required/necessary insurance.

7. Can the project be limited to an OTEC facility with its standard by-products, or the research and industrial facilities park is a requirement for the project? If such, does the DEDC has a list of interested and potential tenants for the research and industrial facilities? Are there studies showing the need for such facilities in the area? Will the leases be guaranteed by the DDEC or other government agency?

The research and industrial components of the proposed project are essential elements of the economic rationale embedded in the project. There are multiple economic activities that could be considered highly integrated along the supply-chain on an OTEC facility. These include but are not limited to industrial facilities associated with aquaculture and mariculture, public and private R&D, cooling systems, or any other industry that benefits from the water characteristics produced by OTEC generation. There is no predetermined list of prospective tenants, nor guaranteed lease agreements at this time. Proponents are encouraged to understand the project as an island-wide venture beyond the immediate market area. Local market conditions were considered for project's proposed location; however, local factor endowments or market conditions are island wide. Proponents are advised to submit proposals limited to the scope outlined in the RFQ. Moreover, the selected developer/entity will be responsible to attract potential tenants, which could be done in alliance with Invest PR and/or DEDC. Lease contract, terms and conditions with potential tenants will be a responsibility of the selected developer/entity directly with each future tenant. The selected developer/entity will enter into a long-term lease agreement with the PR Land Bank Administrator (owner of the site in Yabucoa) for a design, procure, build, operate and maintain the new park. The selected developer/entity might enter into O&M agreements with third parties for partial components or the full park.



8. Will there be an initial \$54 Million subsidy for the project?

Currently there is no definition of a potential subsidy for proponents. Such determination is conditioned by multiple areas of local and federal legislation. Any subsidy amount is contingent to project size, type of tenants, legal arrangements, total development costs, grants, among other factors. On the other hand, selected developer/entity might apply to local, state and/or federal grants and incentives in accordance with applicable laws and regulations, and as per eligible activities, including but not limited to Puerto Rico Act 60-2017, US DOH CDBG-DR, etc. Nevertheless, the proponent should demonstrate financing capacity.

9. The proposed site is adjacent to the former Shell Chemical facilities. Has the soil of the proposed site tested for contaminants?

The proposed site soil has not been tested for contaminants. Up to this moment the Land Administration has had no information of events or indications of contamination that that would have required such testing. Also, the project's proposed location is not listed under the Environmental Protection Agency's "Super Fund" sites located in Puerto Rico list designated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Regarding Buckeye Caribbean Terminals Incorporated (BCTI), visit: <https://www.epa.gov/hwcorrectiveactionsites/hazardous-waste-cleanup-buckeye-caribbean-terminals-incorporated-yabucoa>. In addition, it is expected that BCTI will continue operations. Additionally, the selected developer/entity will be responsible for all environmental studies and permitting for the project.

10. If we as an engineer have registered the project interest for our team, including developer, operator and investor partners, does that disqualify us as the respondent was noted to be "developer" or "investor" entities?

The team that was registered will be evaluated based on each individual resume, if provided. The investor, developer and engineer will be analyzed and the result from that evaluation will be considered as one applicant. The RFQ encourages the creation of consortiums and joint ventures. Each applicant will be evaluated considering each sub-entity part of the proposed project team as per the RFQ.



11. It is noted that the preparation of the RFQ response will be at the expense of the respondents. Is the RFP process intended to be a design competition where respondents are at further risk without compensation should their bid not be accepted? We have reviewed the RFP process description on page 21 of the RFQ document and the subsequent “Guidelines for development of proposal submissions” but the level of detail of “project plans” is not entirely clear. What is the level of detail anticipated in the RFP concept response?

Costs and risks associated with the preparation and response to both the RFQ and RFP are borne by the Proponent. Additional details will be provided in the RFP phase, but it will include a request for a Conceptual Master Plan that confirms the development adheres to the Department of Economic Development and Commerce proposed intention for the park. This Master Plan proposal is needed to understand relationship of the site and the scale of the suggested schematic design. Moreover, the RFQ is intended to evaluate the qualifications for each applicant to ensure they have the required expertise, knowledge, management and financial capabilities (among other criteria as per the RFQ) to develop such a challenging project.

12. It does not appear that the site is listed in the national registry of superfund sites and the data reported on the surrounding wetlands and seabed seem to indicate a relatively healthy natural environment, but it is noted that the Buckeye Fuel Storage site may be a source of contamination. Has there been any reported history of site contamination of any kind? Is the Fuel Storage Site to remain operational for the foreseeable future?

There is no information on the Land Administration archives of any reported contamination on the site of the proposed PROTech project. It is likely that fuel storage will continue at the site. This could change in the future as power generation shifts to renewables. Currently, the project’s proposed location is not listed under the Environmental Protection Agency’s “Super Fund” sites located in Puerto Rico list designated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Regarding Buckeye Caribbean Terminals Incorporated (BCTI), visit:

<https://www.epa.gov/hwcorrectiveactionsites/hazardous-waste-cleanup-buckeye-caribbean-terminals-incorporated-yabucoa>. In addition, it is expected that BCTI will continue operations. The Fuel Storage facility adjacent to the site will remain operational for the foreseeable future.



13. Multiple sustainability goals are noted for the built environment. Should it be anticipated that sustainability certifications such as LEED may be a mandated component of any or all of the structures included on site? It is noted that the bylaws will be stipulated at a later stage, but any current impressions of such guidance would be useful.

USGBC certification is not a requirement. Nevertheless, understanding the site is necessary for implementing passive design that will respond to solar orientation, cross ventilation and other sustainable aspects that will be evaluated on the RFP phase. There are local “green permits” guidelines that will be helpful when designing at a tropical context but is not a mandate. Additionally, the selected developer/entity will be responsible for all environmental studies and permitting for the project, and comply with any applicable local, state and/or federal laws/regulations associated with environmental protection, natural resources conservation and sustainability.

14. It is noted that Component 27 is available for future expansion of additional OTEC/SWAC generation plants. Is there any site preparation requirement anticipated for this area as part of the total development effort of the current project?

The body of water that divides the site should be considered for pedestrian and circulation continuity. The developer will suggest the best alternative based on their master plan.

15. It is noted that an administrative entity will be responsible for reviewing and approving design submittals as it relates to the desired outcome of the project and adherence to the Master Plan vision. Has thought been given to how the developer/investor may be protected from cost overruns due to continual redesign if designs are not approved?

The inquiry pertains to a process outside the scope of the RFQ. Specific requirements for design submittals will be conditioned by the technical requirements established in the RFP. Proponents are expected to understand the overarching requirements that could arise from the Master Plan.



16. Please confirm that the 17.4 Proposal Planning section is not part of the RFQ response but outlines later phase requirements.

17.4 Proposal Planning is not part of the RFQ.

17. Did the inputs for financial modeling take into consideration the impact of recent import tariffs on material costs?

The financial modeling associated with the project considered import tariffs and other transactional costs, as these are embedded in the economic variables considered for the project. Moreover, financial aspects of the project will be addressed in the RFP phase.

18. Did the inputs for financial modeling take into consideration the recent mandates around minimum wage in Puerto Rico and its impact on locally sourced labor costs?

The financial modeling associated with the project considered current labor conditions and other transactional costs, as these are embedded in the economic variables considered for the project. Proponents must be aware that some executive mandated minimum wage rules were repealed. Additionally, financial aspects of the project will be addressed in the RFP phase.

19. Where was the average size of US-based research parks sourced from? Is there cross-referenced information for average occupancy for research parks of the size identified in the financial model?

Average size of research parks was estimated based on research conducted by the Natural Energy Laboratory of Hawaii Authority. Initial research from such institution considered 134 research parks and estimated an average occupancy of 86%. The financial scenarios developed for the project used occupancy rates within a reasonable range, moreover such rates change in time, particularly during initial years. "Reglamento Conjunto" or Joint Agreement from the Permits Management Office (OGPe) provides a cross reference of occupancy for this type of project. In addition to NELHA, research for PROTECH included the Japan park (Okinawa OTEC and DOW facility).



20. Do we need a formal registration with DDEC before we submit the RFQ, SOW?

Registration form was due on July 28, 2020.

21. What is the legal amount volume wise of sea water we can extract for power generation?

This will be addressed during the RFP phase. Plus, the selected developer/entity will be responsible for the engineering, design, environmental studies, licensing and permitting for the project, including volume of sea water to be extracted for the park operation.

22. Is the temperature differential good enough for power generation?

Yes, the temperature differential is good enough for power generation. Additionally, please refer to all previous technical/engineering viability studies such as OTEC Technical Readiness Report from NOAA (2009), among other studies. The availability of stored solar energy based on temperature difference at the south-east region of Puerto Rico has been proven and validated since the 1970's.

23. What is the content of fossil fuels allowed?

The project should be parallel with local public policy. Based on Act 17-2019, Puerto Rico aggressively reduce the use of fossil fuels by generating 100% from renewables in 2050. The use of fossil fuels should be almost banned with this sustainable project.

24. What criteria will be utilized to decide what is the best proposal / bid?

Refer to table on page 20 of the RFQ for criteria. RFP criteria has not been defined as of yet.



25. What has been the determination of the project being under Act 19-2017?

The Proposed Roadmap for Development states in regard to the Environmental Impact Statement process, “However, as a major project of significance, it is anticipated that PROTECH will require a full NEPA EIS process, unless it is found that some of the PROMESA provisions can be used to expedite the review process. For example, PROTECH can be considered as a strategic project under Puerto Rico Act. No. 19-2017, which states that projects that “are considered major, or for which the state has a compelling interest, either because of its nature or its impact on economic development, shall have priority over other projects before all state agencies”

As per §2213 of the Puerto Rico Oversight, Management, and Economic Stability Act, the Project might qualify as a critical project and be granted an expedited permitting process. Further, if qualified by the local Strategic Projects Committee (ascribed to the Puerto Rico Planning Board), the project can also be granted local expedited permitting process. The project will have to be submitted to the Permits Management Office (OGPe) for evaluation after the Proponent is selected.

26. Exhibit 1 – Why is the area reserved for the project only 20 cdas, while the Proposed Roadmap for Development indicates the complex would require approximately 300 acres?

The 20 (cdas) of land is an area reserved by the Land Authority. The 300 for the development excludes the 20, they are separate areas.

27. Exhibit 2 – What is the intent of having prospective developers/operators submit Exhibit 2 with their RFQ packages? As NEPR’s response to DDEC’s 6/2/2020 filing indicates, ocean thermal energy was already included in the Integrated Resource Plan; however, the response is misleading, if not wholly fallacious, in quoting out of context sources on renewable deep geothermal heat, as it is paradoxical to deep ocean thermal cooling.

Respondents do not have to re-submit Exhibit 2. The project was already reviewed by the Puerto Rico Energy Bureau and if there are discrepancies related to the technical terms it is probably an error.



28. Exhibit 2 states, “This facility became operational in 2015 and supplies electricity to the local electricity grid.” Please provide operational data for the 105 kW OTEC demonstration OTEC plant at the NELHA site. NELHA published reports and several other sources only indicate the demonstration plant was inaugurated, but operational data useful to the further development of the technology has not been made available.

The selected developer/entity will be responsible for the engineering, design, environmental studies, licensing and permitting for the project. DEDC will share with the selected developer/entity any available data or information pertinent for the project, including engineering conceptual analysis and design, that might have been completed during the preparation of the Roadmap document. NELHA facility was included as a reference. Any data of information needed from NELHA, will be a responsibility of the selected developer/entity, with prior authorization from NELHA.

29. Will DDEC be promoting Act 83-2010 incentives for this project?

Yes; the project qualifies under Act 60-2019 (Incentives Code). But the proponent should demonstrate financing capacity. It should not rely on such incentives to develop the project.

30. Will Puerto Rico retain the mineral rights to the methane, ammonia, and other materials potentially extracted from the deep ocean water?

Yes; as per Act 9 of August 18 of 1933 the People of Puerto Rico are the owners of all the mineral rights within 14.4881 kilometers (Tres Leguas Marinas) of its jurisdictional waters. Interested party must secure an “Expedition Permit” from the Department of Natural and Environmental Resources. Further information and clarification will be addressed during the RFP process.



31. Will carbon sequestration credits apply if the degassed carbon dioxide is recaptured?

Only when filling federal tax returns will carbon sequestration credits apply in the case of qualified carbon oxide captured using carbon capture equipment which is originally placed in service at a qualified facility before DOE; Department of the Treasury, Internal Revenue Service, Form 8933 (2019). Further information and clarification will be addressed during the RFP process.

32. What measures could be adopted from other demonstration sites to limit the formation of super-cooled stratiform acid-water (Type I, ozone depleting) clouds from the degassing of saturated carbon dioxide and methane from the ocean depths?

Under the Clean Air Act (CAA), the Project must follow the Environmental Protection Agency's (EPA) limits on air pollutants and emissions. Please, see the EPA's Clean Air Act Stationary Source Compliance Monitoring Strategy. Under Puerto Rican law, the Department of Natural and Environmental Resources has jurisdiction of the matter. Further information and clarification will be addressed during the RFP process.

33. What was the assumed occupancy loading for the new hotel and casino on Lucia beach that was figured into the Proposed Roadmap for Development?

The financial analysis associated with the Roadmap for Development do not consider a feasibility study for the proposed hotel, thus no occupancy assumption at this time. Further information and clarification will be addressed during the RFP process.

34. For the purposes of benchmarking economic impacts of the project, what are the current occupancy rates of "Hotel Lucia Beach" and "Tropical Inns" located in the proposed area of the new hotel and casino?

The Puerto Rico Tourism Company publishes average occupancy rates, available at https://www.prtourism.com/dnn/Statistics_old02162018



35. Has input been solicited from organizations conserving the marine ecosystem and fishing industry in Puerto Rico, such as *Conservacion ConCiencia*?

No. Input in the referred matter has been solicited from University of Puerto Rico's Mayagüez Campus, Marine Science Department. Further information and clarification will be addressed during the RFP process.

36. The study projects 2164 full time jobs for a development program that includes 787,000 sf of office/industrial space, 547,000 sf of agriculture/mariculture space and 250,000 sf of retail/multi-use space. Where is the skilled employment force drawn from? Do the skills exist in-situ?

The Project is conceived as an island-wide Project. Moreover, it is situated within a 60-minute traveling time from Puerto Rico's main metropolitan area. Thus, the size of the labor force that could serve the project, is beyond the immediate radius. Proponents must keep in mind that the proposed site is geographically close to industrial sites such as those in Guayama, Arroyo, Cayey, Caguas and Humacao.

37. Is there a market study to support the proposed program? Can we see the study? What is the assumed catchment area for the retail?

No feasibility study was performed for the activities outlined. Once proponents are selected, said studies will be required. Proponents must keep in mind that such studies are performed at later stages when total development costs for all proposed economic activities within the park are determined. However, a market study and a preliminary economic and financial feasibility analysis was performed for the park as a whole (tenant manager).



38. The plan does not allow for housing. Is there sufficient housing to support the anticipated employment? If not, are there plans to provide adequate housing options?

The Project is conceived as an island-wide Project. Moreover, it is situated within a 60-minute traveling time from Puerto Rico's main metropolitan area. Thus, housing supply is beyond the immediate radius of the project and is currently available at multiple income levels and tenures within the local market.

39. The plan calls for the construction of five parking structures. How many parking spaces were assumed?

Parking structures were placed following the general distribution of the plan, their location is not determined based on a technical study. During the design phase the proponent will need to take into account the Joint Agreement, square footage, usage, etc. to determine spaces.

40. The plan indicates that there are no identified sewer facilities and that one will have to be provided.

Correct, there are no identified sewer facilities and one will have to be provided.

41. Sources of funding and programs are listed, however there does not appear to be a Financial package to prospective master developers identified. Are there any assumptions about government support that can be factored into evaluating a development proforma?

Selected developer/entity might apply to local, state and/or federal grants and incentives in accordance with applicable laws and regulations, and as per eligible activities, including but not limited to Puerto Rico Act 60-2017, US DOH CDBG-DR, etc. Nevertheless, the proponent should demonstrate financing capacity.



42. The plan identifies a significant number of permits necessary to implement the plan. What is the government's role in support of obtaining the permits?

As per §2213 of the Puerto Rico Oversight, Management, and Economic Stability Act, the Project might qualify as a critical project and be granted an expedited permitting process. Further, if qualified by the local Strategic Projects Committee (ascribed to the Puerto Rico Planning Board), the project can also be granted local expedited permitting process. The project will have to be submitted to the permits office (OGPe) for evaluation after the Proponent is selected.