

Republic of the Philippines  
**ENERGY REGULATORY COMMISSION**  
San Miguel Avenue, Pasig City



**IN THE MATTER OF THE  
APPLICATION FOR  
AUTHORITY TO DEVELOP,  
OWN, AND OPERATE  
DEDICATED POINT-TO-  
POINT LIMITED FACILITIES  
TO CONNECT THE PALAYAN  
BINARY POWER PLANT  
PROJECT TO THE LUZON  
GRID, WITH PRAYER FOR  
PROVISIONAL AUTHORITY**

**ERC CASE NO. 2019-001 MC**

**BAC-MAN GEOTHERMAL  
INC.,**

**Applicant.**

**X-----X**

Promulgated:  
**FEB 19 2019**

**NOTICE OF PUBLIC HEARING**

**TO ALL INTERESTED PARTIES:**

Notice is hereby given that on 18 January 2019, Bac-Man Geothermal Inc., (BGI) filed an *Application* seeking for authority to develop, own, and operate a dedicated point-to-point limited facilities to connect the Palayan Binary Power Plant project to the Luzon Grid, with prayer for provisional authority,

The pertinent portions of the said *Application* are hereunder quoted as follows:

**A. Introduction**

1. BGI is a corporation duly organized and validly existing under and by virtue of the laws of the Republic of the Philippines, with principal office address at One Corporate Centre, Julia Vargas Avenue corner Meralco Avenue, Ortigas Center, Pasig City. It may be served with orders and other legal processes through the undersigned counsel.
2. BGI is in the business of, among others, generating, storing, transmitting, and/or distributing energy, including electricity and ancillary power derived from any and all forms, types, and kinds of renewable and other energy sources for lighting, power and other

purposes. BGI is a subsidiary of Energy Development Corporation (“EDC”).<sup>23</sup>

3. In its Power Development Plan 2016-2040, the Department of Energy (“DOE”) recognized the growing demand for power in the Philippines. For the Luzon Grid, the DOE projected the peak demand to “triple from 9,726 MW in 2016 to 29,852 MW in 2040.” Accordingly, the Luzon Grid will require 13,635 MW of baseload capacity, 8,300 MW of mid-merit capacity, and 2,450 MW peaking capacity with a total of 24,385 MW capacity addition in the grid. Given the current available capacity and the committed capacity addition up to 2020, the DOE projects that the Luzon Grid will start to need additional capacity by 2023.<sup>24</sup>
4. To help alleviate the increasing energy demand and in response to the Philippine Government’s call to accelerate the exploration and development of renewable energy resources under Republic Act No. 9513, or the Renewable Energy Act of 2008, BGI is developing the Palayan Binary Geothermal Power Plant Project (the “Project” or the “Palayan Binary Power Plant Project”) located in Barangay Nagotgot, Municipality of Manito, Province of Albay.
5. In order to convey the energy generated by the Project to the public, BGI intends to connect the Palayan Binary Power Plant to the Luzon Grid. For this purpose, BGI plans to construct an approximately 600-meter 230-kV transmission line, composed of transmission wires, steel lattice towers, steel poles and other related facilities, and a switchyard that has provision for expansion to serve as common switching station of future power plant projects of BGI (the “Connection Asset”). This Connection Asset is for exclusive use, which shall connect the Plant directly to the Bac-Man Switchyard owned and operated by BGI.
6. Section 9 of Republic Act (“RA”) 9136 or the Electric Power Industry Reform Act (“EPIRA”) of 2001 expressly provides that:

“A generation company may develop and own or operate dedicated point-to-point limited transmission facilities that are consistent with the Transmission Development Plant (“TDP”): *Provided*, That such facilities are required only for the purpose of connecting to the transmission system, and are used solely by the generating facility, subject to prior authorization by the ERC: *Provided, further*, That in the event that such assets are required for competitive purposes, ownership of the same shall be transferred to the TRANSCO at a fair market price: *Provided, finally*, That in the case of disagreement on the fair market price, the ERC shall determine the fair market value of the asset.”

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<sup>23</sup>A copy of BGI’s Certificate of Incorporation, Articles of Incorporation and By-Laws, and latest General Information Sheet are attached hereto as Annexes “A”, “B”, and “C”, respectively.

<sup>24</sup> A print-out of the relevant section in the Department of Energy’s (DOE) Power Development Plan 2016-2040 is attached hereto as Annex “D”.

**B. Allegations in Support of Application**

7. On May 8, 2012, BGI was granted a Certificate of Registration<sup>25</sup> by the DOE, with Registration No. 2012-04-039. This Certificate recognizes BGI as a Renewable Energy (“RE”) developer of the Bac-Man Geothermal Power Plant Complex located in Bacon District, Sorsogon City, Province of Sorsogon and in the municipality of Manito, Province of Albay.
8. On August 31, 2017, BGI’s parent company, EDC, submitted a request to the DOE to endorse and issue to the National Grid Corporation of the Philippines (“NGCP”) a clearance for the conduct of a System Impact Study (“SIS”) for possible addition of geothermal power plants with a maximum capacity of 80 MW.<sup>26</sup> In response to this request, the DOE, in a letter dated November 17, 2017, granted EDC clearance to start the negotiation with the NGCP for the conduct of said SIS.<sup>27</sup>
9. An assessment of the impact of the Palayan Binary Power Plant Project on the Luzon Grid was conducted by Engineer Anastacio R. Almario (doing business under the name and style of Almario’s Computer, Civil-Electrical Protection and Safety Technology), an independent third party commissioned by EDC.<sup>28</sup> An SIS was subsequently prepared by Engr. Almario, and the same was transmitted to the NGCP on February 8, 2018 for the latter’s review and approval.<sup>29</sup> NGCP reviewed and approved the SIS prepared by Engr. Almario and found that it is technically feasible to connect the Project to the Luzon Grid.<sup>30</sup>
10. EDC also prepared a Facilities Study (“FS”) in September 2018 which declares, among others, that based on preliminary analysis, the connection of the Project to the Luzon Grid will not introduce modifications to the existing facilities of the NGCP, and that the Project’s equipment specifications are in accordance with the 2016 Philippine Grid Code (“PGC”), the 2006 Open Access Transmission Service (“OATS”) Rules, and the NGCP standards<sup>31</sup>. The FS is currently under review by the NGCP.
11. On 17 August 2018, EDC requested NGCP for approval to have the SIS and all associated rights, interests, and obligations therein assigned to BGI, as the entity designated to carry out the development of the Project.<sup>32</sup>

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<sup>25</sup> A copy of the DOE Certificate of Registration No. 2012-04-039 issued to Bac-Man Geothermal Inc. on 8 May 2012 is attached hereto as Annex “E”.

<sup>26</sup> A copy of EDC’s letter to DOE requesting for clearance to undertake a System Impact Study (SIS) is attached hereto as Annex “F”.

<sup>27</sup> A copy of DOE’s letter to EDC dated November 17, 2017 granting clearance to undertake System Impact Study is attached hereto as Annex “G”.

<sup>28</sup> A copy of the business profile of Engr. Anastacio R. Almario is attached hereto as Annex “H”.

<sup>29</sup> A copy of Engr. Almario’s letter transmitting the SIS to NGCP, dated February 8, 2018, is attached hereto as Annex “I”.

<sup>30</sup> A copy of NGCP’s Final Review Report on the System Impact Study for the Palayan and Tanawon Geothermal Power Plants is attached hereto as Annex “J”.

<sup>31</sup> A copy of the Facilities Study prepared for the Palayan Binary and Tanawon Geothermal Power Projects is attached hereto as Annex “K”.

<sup>32</sup> A copy of EDC’s letter to NGCP on the assignment of SIS to BGI, dated October 17, 2018, is attached hereto as Annex “L”.

12. The Sangguniang Barangay of Nagotgot, Manito, Albay has endorsed the Palayan Binary Power Plant Project and has passed a resolution of support for the project.<sup>33</sup> The Sangguniang Bayan of Manito, Albay has likewise endorsed the Project and passed a resolution of support.<sup>34</sup>
13. On December 11, 2017, the Project secured an Environmental Compliance Certificate under ECC No. ECC-R05-1712-0054.<sup>35</sup> Said ECC was amended on December 3, 2018 to incorporate the change in the Project's total power generating capacity to 35 MW from the original 25 MW.<sup>36</sup> On February 23, 2018, the Project also obtained a Certificate of Non-Overlap with CNO No. RV-18-01 Albay from the National Commission on Indigenous Peoples ("NCIP") Regional Office No. 5.<sup>37</sup>
14. BGI is in the process of obtaining the permits and licenses needed for the construction and development of the Project and will ensure timely application for such authorizations necessary for its operation, including the Certificate of Compliance ("COC") from this Honorable Commission.<sup>38</sup>

*THE PALAYAN BINARY POWER  
PLANT CONNECTION ASSET IS  
FINANCIALLY FEASIBLE, AND  
BGI HAS THE FINANCIAL  
CAPABILITY TO DEVELOP,  
OPERATE, AND MAINTAIN  
THE CONNECTION ASSET*

15. The Connection Asset is financially feasible. The cost for constructing and developing the Connection Asset is estimated at Php 200 Million Pesos.<sup>39</sup> The Palayan Binary Power Plant Project, including the Connection Asset, will be funded through cash.
16. BGI's audited financial statement for the Years 2017 and 2016 will show that BGI has sufficient funds on hand to undertake the construction, development, operation, and maintenance of the entire Project.<sup>40</sup> With respect to the Net Present Value and five- (5) year projected financial ratios, these do not only apply to the Connection Asset; rather, these apply to the Palayan Binary Power Plant as a

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<sup>33</sup> A copy of Resolution No. 012, Series of 2018 from the Sangguniang Barangay of Nagotgot, Manito, Albay containing is attached hereto as Annex "M".

<sup>34</sup> A copy of Resolution No. 102-2018 from the Sangguniang Bayan of Manito, Albay is attached hereto as Annex "N".

<sup>35</sup> A copy of the Project's Environmental Compliance Certificate (ECC) with No. 0301-007-203 is attached hereto as Annex "O-1".

<sup>36</sup> A copy of DENR-EMB Region V's letter approving the amendment of the ECC is attached hereto as Annex "O-2".

<sup>37</sup> A copy of the Certificate of Non-Overlap with Control No. RV-08-002-A1&Sor dated 3 March 2008 is attached hereto as Annex "P".

<sup>38</sup> A copy of the affidavit of Francisco Carlo L. Santos, Project Manager of the Palayan Binary Power Plant Project, is attached hereto as Annex "Q".

<sup>39</sup> A copy of the Estimated Cost of Construction and Development of Connection Asset is attached hereto as Annex "R".

<sup>40</sup> A copy of EDC's Audited Financial Statement for the Years ended 2017 and 2016 is attached hereto as Annex "S".

comprehensive project, which is expected to be in operation within the first half of 2021.<sup>41</sup>

17. BGI carefully studied two options for the Connection Project: a) Option A, which will entail the construction of about 1.5 kilometers of transmission line; and b) Option B, which will involve constructing about 600 meters transmission line. A comparison between these options is provided below:

<b>Parameter</b>	<b>Option A</b>	<b>Option B</b>
kV rating	230	230
Length (km)	~1.5	~0.6
Scheme	Overhead	Overhead
Land form	Flat area & ravine	Flat area
Towers/Pole to Construct	5	2
Level of construction difficulty	Difficult	Moderate

BGI chose Option B because it is the shorter, more economical, and more viable option to convey the electric power generated by the Project to the public.

***THE PALAYAN BINARY POWER PLANT CONNECTION ASSET IS TECHNICALLY FEASIBLE, AND BGI HAS THE TECHNICAL CAPABILITY TO DEVELOP, OPERATE, AND MAINTAIN THE CONNECTION ASSET***

18. The SIS shows that the Connection Asset is technically feasible. Likewise, BGI--by itself or through its parent company, EDC or its affiliates--has the technical capability to develop, construct, operate, and maintain the Connection Asset.

18.1 BGI is a subsidiary of EDC, the largest producer of geothermal energy in the Philippines and the third largest in the world. It has expertise spanning the entire geothermal energy value chain, including geothermal energy exploration and development, reservoir engineering and management, engineering design and construction, environmental management, and energy research and development.

18.2 Since 1996, EDC, through its Transmission and Dispatch personnel, has been operating the connection asset of the Unified Leyte ("UL") Power System.

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<sup>41</sup> A copy of the latest Five-Year Financial Projections for the Palayan Binary Power Plant Project is attached hereto as Annex "T".

18.2.1 The UL Power System is the electrical system that interconnects the UL geothermal power plants to the Luzon and Visayas grids. The system makes it possible to transmit bulk electrical power from Leyte to the commercial and industrial load centers in the islands of Luzon and Cebu.

18.2.2 The UL Power System is composed of seven switchyards interconnected by high voltage transmission lines and directed by a complex control system.

18.3 In recent years, EDC has expanded its portfolio of renewable energy projects by venturing into hydro, wind, and solar energy development and operation.

18.4 EDC and BGI have the experience, technical expertise, and resources necessary to undertake the commitments specified in the work programs of their service contracts with the DOE, including the development and operation of the Palayan Binary Power Plant Project.

18.5 The operation and maintenance of the Connection Asset is planned to be carried out by three (3) to five (5) personnel belonging to the Facilities Operations and Maintenance ("FOM") Group of both EDC and BGI. These personnel will be under the supervision and direction of Engr. Ireneo D. Itoses, as the Head of EDC FOM, and Engr. Marcel D. Rosario, as the Head of Bacon-Manito (Bac-Man) Geothermal Facility. The personnel can all be contacted through BGI at its principal office address.

***BGI SHOULD BE GRANTED  
AUTHORITY TO DEVELOP,  
OWN AND OPERATE THE  
CONNECTION ASSET***

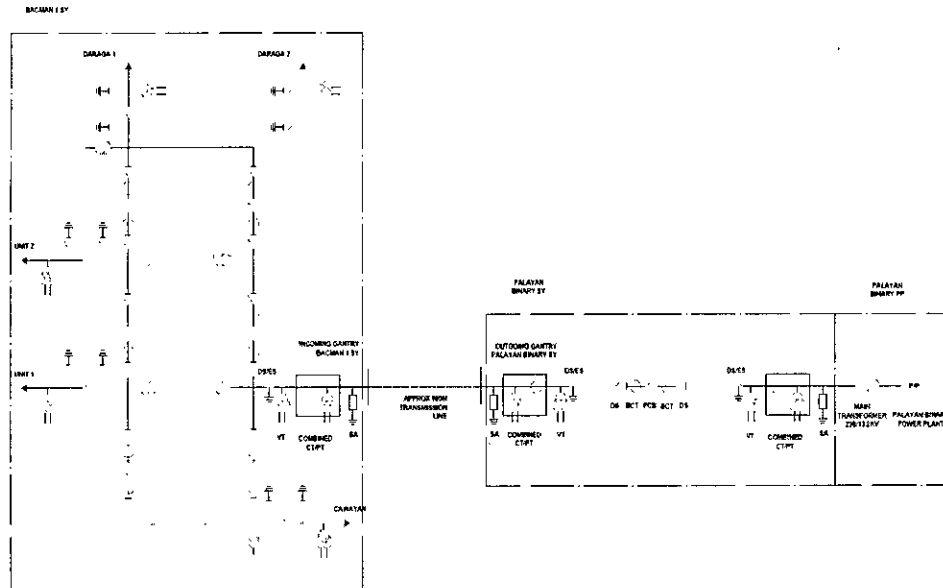
19. Pursuant to Section 9 of the EPIRA, BGI hereby applies with the Honorable Commission for authority to develop, own, and operate the Connection Asset.

19.1 BGI's Connection Asset is required only to connect the Palayan Binary Power Plant Project to the Luzon Grid.

19.2 The Connection Asset will be used solely by the Palayan Binary Power Plant Project.

19.3 If the Connection Asset is taken out of the transmission system, it will not affect the Luzon Grid.

20. The single-line diagram of the proposed interconnection shows that the Connection Asset will be exclusively used by the Palayan Binary Power Plant Project<sup>42</sup>



21. BGI endeavors that the Connection Asset will comply with the existing rules and regulations, particularly the Philippine Grid Code, and undertakes to comply with all such rules and regulations.<sup>43</sup>

**Motion for Provisional Authority  
and Allegations in Support of Prayer for Provisional Authority**

22. Rule 14 of the Honorable Commission's Rules of Practice and Procedure authorizes the issuance of a provisional authority or an interim relief prior to a final decision, provided that the facts and circumstances warrant the issuance of the same.
23. BGI expects to complete the construction of the Connection Asset within the first half of 2020. The Company intends to have the Connection Asset in place and ready for the commissioning of the Palayan Binary Power Plant Project, which is scheduled to happen within the fourth quarter of 2020.<sup>44</sup>
24. Given the urgent need for additional capacity by 2023 and onwards as projected by the DOE, the completion of the Palayan Binary Power Plant Project within the projected time frame is critical to ensure that additional capacity will be available for the Luzon Grid in a timely manner. BGI respectfully prays that the Honorable Commission provisionally authorize the development, ownership, and operation of the Connection Asset considering that the power demand projected by the DOE warrants the issuance of a Provisional Authority.

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<sup>42</sup> A copy of the Single Line Diagram is attached hereto as Annex "U".

<sup>43</sup> An Undertaking to Comply with the Philippine Grid Code is attached hereto as Annex "V".

<sup>44</sup> A copy of the Project Schedule is attached hereto as Annex "W".

25. It is in such context that BGI respectfully prays that a provisional authority be immediately issued for the development and construction of the Connection Asset.

**OTHER RELATED DOCUMENTS**

26. In further support of the instant application, the Applicant most respectfully submit to the Honorable Commission, the following documents:

Annex	Document
A	Certificate of Incorporation, Original Articles of Incorporation, and By-Laws
B	Amended Articles of Incorporation
C	Latest General Information Sheet
D	DOE Power Development Plan 2016-2040
E	DOE Certificate of Registration No. GOC 2012-04-039
F	EDC's Letter of Request to DOE re: Clearance for System Impact Study, dated August 31, 2017
G	DOE's Reply Letter to EDC re: Clearance to Undertake System Impact Study, dated November 17, 2017
H	Business Profile of Engr. Anastacio R. Almario (doing business under the name and style of Almario's Computer, Civil-Electrical Protection and Safety Technology)
I	Letter of Engr. Anastacio R. Almario to Ms. Ma. Cynthia Y. Manrique, NGCP Revenue and Regulatory Affairs Head, dated February 8, 2018
J	NGCP Final Review Report on the System Impact Study for the Palayan and Tanawon Geothermal Power Plants
K	Facilities Study for the Palayan Binary and Tanawon Geothermal Power Plant Projects
L	Letter of EDC to NGCP on the Assignment of SIS to BGI, dated October 17, 2018
M	Resolution of Endorsement from the Sangguniang Barangay of Nagotgot, Manito, Albay
N	Resolution of Endorsement from the Sangguniang Bayan of Manito, Albay
O-1	Environmental Compliance Certificate (No. ECC-R05-1712- 0054)
O-2	Letter from DENR-EMB Region V approving the change in the Project's total generating power capacity, dated December 3, 2018
P	Certificate of Non-Overlap from the National Commission on Indigenous Peoples with Control No. RV-18-01 Albay
Q	Affidavit of Francisco Carlo L. Santos, Senior Manager, stating that the necessary applications for approval and endorsement of Palayan Bayan Binary Power Plant Project will be filed with the relevant government authorities
R	Estimated Cost of Construction and Development of Connection Asset
S	Audited Financial Statement of BGI for years ended 2017 and 2016



T	Five-Year Financial Projections for the Palayan Binary Power Plant Project
U	Single Line Diagram
V	Undertaking to Comply with the Philippine Grid Code
W	Project Schedule (Gantt Chart)
X	Technical Description of Connection Asset and Its Component Facilities and Equipment
Y	Transmission Line Connection Route

PRAYER

WHEREFORE, Applicant BGI most respectfully prays that this Honorable Commission:

1. Issue an order provisionally authorizing BGI to develop, own, and operate the Connection Asset for the Palayan Binary Power Plant Geothermal Project; and
2. After due notice and hearing, issue a final order: i) making the provisional authority a permanent authority to develop, own and operate the Connection Asset; and ii) authorizing BGI to operate and maintain the Connection Asset until such time said project is otherwise re-classified, owned, operated and maintained by NGCP.

Other reliefs as may be appropriate under the circumstances are likewise prayed for.

The Commission has set the *Application* for determination of compliance with the jurisdictional requirements, expository presentation, pre-trial conference, and presentation of evidence on **20 March 2019 (Wednesday), at two o'clock in the afternoon (2:00 P.M.), at the 15<sup>th</sup> Floor, ERC Hearing Room, Pacific Center Building, San Miguel Avenue, Pasig City.**

All persons who have an interest in the subject matter of the instant case may become a party by filing with the Commission a verified Petition to Intervene at least five (5) days prior to the initial hearing and subject to the requirements under Rule 9 of the 2006 ERC Rules of Practice and Procedure, indicating therein the docket number and title of the case and stating the following:


- 1) The petitioner's name and address;
- 2) The nature of petitioner's interest in the subject matter of the proceeding and the way and manner in which such interest is affected by the issues involved in the proceeding; and
- 3) A statement of the relief desired.

All other persons who may want their views known to the Commission with respect to the subject matter of the case may file their Opposition or Comment thereon at any stage of the proceeding before Applicant rests its case, subject to the requirements under Rule 9 of the 2006 ERC Rules of Practice and Procedure. No particular form of Opposition or Comment is required, but the document, letter, or writing should contain the following:

- 1) The name and address of such person;
- 2) A concise statement of the Opposition or Comment; and
- 3) The grounds relied upon.

All such persons who wish to have a copy of the *Application* may request from Applicant that they be furnished with the same, prior to the date of the initial hearing. BGI is hereby directed to furnish all those making such request with copies of the *Application* and its attachments, subject to the reimbursement of reasonable photocopying costs. Any such person may likewise examine the *Application* and other pertinent records filed with the Commission during the standard office hours.

**WITNESS**, the Honorable Chairperson and CEO, **AGNES VST DEVANADERA**, and the Honorable Commissioners **ALEXIS M. LUMBATAN**, **CATHERINE P. MACEDA**, and **PAUL CHRISTIAN M. CERVANTES**, Energy Regulatory Commission, this 12<sup>th</sup> day of February 2019 in Pasig City.

  
**JOSEFINA PATRICIA A. MAGPALE-ASIRIT**  
*Oversight Commissioner for Legal Service*

  
LS: LED/ARG/GLO