



Licence No: FANR/NF/2016/002

Licence for the Handling and Storage of Unirradiated Nuclear Fuel

Capitalized terms used but not defined herein shall have the meaning ascribed to them in Article (1) of Federal Law by Decree No. 6 of 2009 Concerning the Peaceful Uses of Nuclear Energy (the **Law**) and in Article (1) of the Regulation for the System of Accounting for and Control of Nuclear Material and Application of Additional Protocol (FANR-REG-10). Any reference herein to Schedule means a reference to a Schedule of this Licence.

Under the powers provided in Articles (6), (28) and (39) of the Law, and having considered that the proposed activities of Nawah Energy Company P.J.S.C. comply with the relevant Safety objectives, principles and requirements of the Law, the Board of Management of the Federal Authority for Nuclear Regulation (the **Authority**) has approved the issuance of a licence (**Licence**) for the introduction, possession, Handling, and Storage of unirradiated nuclear fuel at the Barakah Nuclear Power Plant Unit 1 facility (the **BNPP Unit 1**) to:

Nawah Energy Company P.J.S.C. (the Licensee)

being a company established in Abu Dhabi (Commercial Licence CN-2156772).

This Licence authorizes the Licensee to conduct the following Regulated Activities set forth in Article (25) of the Law:

Possession, Introduction, Handling and Storage of Unirradiated Nuclear Fuel

The activities authorized by this Licence are further specified in Schedule 1. The Licence conditions are set forth in Schedule 2. Requirements of the State System of Accounting for and Control of Nuclear Material, including reference to Nuclear Material Accounting for and Control procedures approved by the Authority (the **Approved Safeguards Procedures**), are set forth in Schedule 3. A description of the fuel Handling and Storage activities, structures, systems, and components are set forth in the application documents referenced in Schedule 4 (the **Application Documents**).

This Licence shall remain in force until:

- it is suspended or revoked by the Authority;
- it is amended or renewed by the Authority;
- it is surrendered by the Licensee; or
- the Authority issues a licence for the operation for the Nuclear Facility covered by this Licence.

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United Arab Emirates



This Licence is granted without prejudice to any future decision by the Authority regarding the suitability and specifications of the operation of the Nuclear Facility or its structures, systems and components (SSCs) including the nuclear fuel.

Christer Viktorsson
Director General

Issued in Abu Dhabi
15 December 2016

The Licence comprises this page, the preceding page and the following Schedules:

- Schedule 1: (1 page) Activities Authorized;
- Schedule 2: (3 pages) Licence Conditions;
- Schedule 3: (1 page) The State System of Accounting for and Control of Nuclear Material;
- Schedule 4: (3 pages) Application Documents References.



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Schedule 1

Activities Authorised

This Licence authorizes possession, handling, introduction and Storage of unirradiated nuclear fuel at the BNPP Unit 1 located in the Emirate of Abu Dhabi, United Arab Emirates as described in the Application Documents.

1. The Licensee is required to obtain additional licences and/or authorizations from the Authority for:
 - a. Import, export or re-export of any Nuclear Material, equipment and technology specified in IAEA INFCIRC/254/Part 1 (as amended) or any nuclear-related dual-use equipment, materials, software and related technology specified in IAEA INFCIRC/254/Part 2 (as amended);
 - b. Import of any equipment that contains Nuclear Material;
 - c. Loading nuclear fuel into the reactor of the Nuclear Facility; and
 - d. Undertaking any other Regulated Activity.
2. The Licensee shall obtain all necessary licences, permits and authorizations from other government agencies for conducting any activities authorized by the Authority under this Licence.



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Schedule 2

Licence Conditions

This Licence is subject to, and the Licensee shall comply with, the conditions specified and incorporated below:

1. **Compliance with the Law, regulations, Licence and the Licensee's submissions:** The Licensee shall conduct the activities authorized by this Licence in accordance with:
 - a) The Law;
 - b) The Federal Law by Decree No. 4 of 2012 Concerning Civil Liability for Nuclear Damage;
 - c) The applicable regulations issued by the Authority pursuant to the Law;
 - d) The terms and conditions of this Licence; and
 - e) The Application Documents including those listed in Schedule 4, documents referenced in and/or submitted with the Licensee's application for this Licence and additional information submitted by the Licensee.
2. **Transfer of Licence:** This Licence or any right hereunder shall not be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of this Licence or the Licensee to any person.
3. **Modifications:** The Licensee shall obtain the written approval of the Authority prior to implementing modifications to any of the following which may result in significant Safety, Nuclear Security, safeguards, or nuclear damage liability implications:
 - a) any Management System and organizational arrangements;
 - b) the SSCs of the Nuclear Facility;
 - c) any of the Application Documents submitted by the Licensee; or
 - d) any modifications to unirradiated nuclear fuel assemblies specified in Schedule 3.
4. **Plan of activities:** The Licensee shall provide the Authority, within 30 days of the granting of this Licence, schedules and timelines of the principal activities to be undertaken under the general authority of the Licence. The Licensee shall update this information as may be deemed necessary by the Authority.
5. **Regular reporting:**
 - a) The Licensee shall provide to the Authority, within 15 days of the end of each calendar quarter, a report on the Regulated Activities carried out under this Licence;
 - b) The Licensee shall annually provide to the Authority information on availability of financial security in the amount and to the extent determined by the Federal Law by Decree No. 4 of 2012 Concerning Civil Liability for Nuclear Damage.



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6. Reporting of unplanned events:

a) The Licensee shall notify the Authority of:

- i. Any violation of the conditions of this Licence;
- ii. Any Accident or event during the conduct of the activities permitted by this licence that affects or has the potential to affect Safety, Radiation Protection, Nuclear Safety, Nuclear Security or Safeguards;
- iii. Any nuclear incident, of any claim concerning nuclear third party liability earnestly made, or filed before a law court, against the Licensee, and of any payment effected by the Licensee in fulfilment of a compensation claim under the Federal Law by Decree No. 4 of 2012 Concerning Civil Liability for Nuclear Damage;
- iv. Any loss of control of Nuclear Material or any event that prevents the IAEA or the Authority's ability to verify Nuclear Material.

b) The Licensee shall:

- i. Notify the Authority within 72 hours of its finding of each reportable violation, Accident, event or incident in Licence Condition 6(a)(i), (ii) or (iii) above;
- ii. Submit to the Authority a written report within 30 days. The report shall include a description of the reportable violation, Accident, event or incident, an analysis of the Safety implications and the corrective action taken, and sufficient information to permit review and evaluation of such corrective action. If sufficient information is not available for a definitive report to be submitted within 30 days, an interim report containing all available information shall be filed with the Authority, together with a statement that indicates when a complete report will be filed with the Authority; and
- iii. Report to the Safeguards Department of the Authority immediately by phone, fax or e-mail and followed by a Special Report in accordance with Article 9(2)(e) and Article 12 of FANR-REG-10, any event referred to in Licence Condition 6(iv) above.

7. Access to facilities and documents, and assistance: The Licensee shall provide the Authority and its authorized representatives or inspectors, and designated safeguards inspectors of the International Atomic Energy Agency (IAEA), with unfettered access to any place, to any document, record or report or to any person under the Licensee's control or the control of any of the Licensee's affiliates, contractors, subcontractors, suppliers, agents or other legal entities acting on behalf of the Licensee, and shall provide all assistance necessary to enable the Authority or the IAEA or the to inspect the licensed Regulated Activities in accordance with the provisions of the Safeguards Agreement and the Law including, without limitation, Articles (5), (35) and (36).

8. Records: The Licensee shall develop, maintain and implement arrangements for making and retaining adequate and detailed records of compliance with the conditions and requirements of this Licence. The Licensee shall retain all the foregoing records until the Nuclear Facility has been decommissioned.

9. Fulfilment of commitments: The Licensee shall comply with the commitments made in the Application Documents. Amendments to the commitments made in the Application Documents shall be subject to the approval of the Authority.

10. Domestic transfer of Nuclear Material: Domestic transfer of Nuclear Material may only be carried out to entities licensed by the Authority.

Schedule 3

The State System of Accounting for and Control of Nuclear Material

1. Specification of Nuclear Material

This Licence authorises the Regulated Activities specified in Schedule 1 to be conducted with:

- Category of Nuclear Material:** Low enriched uranium with a nominal enrichment less than 5 % w/o of the isotope ²³⁵Uranium
- Total quantity of Nuclear Material:** Not exceeding the quantity specified in the DIQ set forth in section 4 of this Schedule.
- Purpose of use:** APR-1400 Fuel Assemblies in accordance with the DIQ.

2. Assigned codes for reporting and communications

For the purposes of the State System of Accounting for and Control of Nuclear Material, the Authority assigns the following codes for the Nuclear Facility that shall be used by the Licensee pursuant to Article 8(1) of FANR-REG-10:

Site code:	AE-B
Facility code:	AEB1
Material Balance Area code:	AE1B

3. Approved Safeguards Procedures

The Licensee shall use for the purpose of Nuclear Material Accountancy and Control, Physical Inventory Taking and for meeting the requirements specified in FANR-REG-10 the following procedures approved in writing by the Authority pursuant to Article (5) of FANR-REG-10 (the **Approved Safeguards Procedures**).



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Schedule 4

Application Documents References

Letter ENA-FANR-15-0433L, 12 October, 2015, including Enclosure 1, entitled "Safety Analysis Report for Handling and Storage of Unirradiated Nuclear Fuel."

Letter ENA-FANR-16-0646L, 10 August 2016, including Enclosure 1, entitled "Safety Analysis Report for Handling and Storage of Unirradiated Nuclear Fuel."

Letter ENA-FANR-16-0304L, 28 March 2016, "Barakah Nuclear Power Plant Units 1, 2, 3, and 4 – Justification for Elimination of Certified Senior Reactor Operator Presence for Control and Handling of Unirradiated Nuclear Fuel"

Letter ENA-FANR- 16-0359L, 13 April 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAIs 3.4-001 and 6.0-001"

Letter ENA-FANR-16-0338L, 19 April 2016, "Nuclear Civil Liability and Insurance: Request for Information"

Letter ENA-FANR- 16-0407L, 03 May 2016, "Barakah NPP Unit 1 - License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 5.2-001"

Letter ENA-FANR- 16-0418L, 08 May 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 9.0-002"

Letter ENA-FANR- 16-0455L, 22 May 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 4.0-001"

Letter ENA-FANR- 16-0460L, 23 May 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 2.0-001"

Letter ENA-FANR-16-0572L, 14 July 2016, Nuclear Civil Liability and Insurance: Request for Information on the Barakah Unit 1 License Applications Related to Nuclear Liability Insurances

Letter ENA-FANR- 16-0616L, 31 July 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 9.0-001"

Letter ENA-FANR- 16-0654L, 15 August 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 9.0-002 F1"

Letter ENA-FANR- 16-0658L, 16 August 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 3.3-001 F1"

Letter ENA-FANR- 16-0682L, 28 August 2016, License Application for Barakah Nuclear Power Plant Unit 1 Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 6.0-001 F1"

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Letter ENA-FANR- 16-0715L, 07 September 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Revised Response to RAI 4.0-001"

Letter ENA-FANR-16-0763L, 6 October 2016,"Nuclear Civil Liability and Insurance: Request for Information on the Barakah Unit 1 License Applications Related to Nuclear Liability Insurances"

Letter ENA-FANR- 15-0721L, 30 December 2015, "Response to Initial Review of Application for a License for the Handling and Storage of Unirradiated Nuclear Fuel"

Letter ENA-FANR- 16-0113L, 31 January 2016, "Barakah NPP Unit 1 - Submittal of Emergency Plan for New Fuel Receipt for Unit 1"

Letter ENA-FANR-16-0329L, 05 April 2016, "Barakah NPP Units 1 and 2 - Structural/Seismic Analysis for New and Spent Fuel Racks - Handling and Storage of Unirradiated Nuclear Fuel and Response to RAI 9.1- 1002"

Letter LRA-FANR-LTR-16-0002, 19 October 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Roadmap of Application Documents"

Letter ENA-FANR-16-0741L, 26 September 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 1.0-002"

Letter ENA-FANR-16-0742L, 27 September 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 1.0-001"

Letter ENA-FANR-16-0774L, 16 October 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Amendment to the RAI 9.0-001 Response"

Letter ENA-FANR-16-0562L, 24 July 2016, "Physical Protection Plan Construction Phase II" Revision 5.

Letter ENA-FANR-16-0160L, 15 February 2016, "Barakah Nuclear Power Plant Units 1, 2, 3 and 4 – Submittal of the Physical Protection Plan, Construction Phase II, Revision 4"

Letter ENA-FANR-16-0488L, 02 June 2016, "Barakah Nuclear Power Plant Units 1, 2, 3 and 4 – Partial Response to FANR on the Physical Protection Plan, Construction Phase II, Revision 4 RAIs"

Letter ENA-FANR-16-0562L, 24 July 2016, "Barakah Nuclear Power Plant Units 1, 2, 3 and 4 - Response to FANR RAIs on the Physical Protection Plan – Construction Phase II, Revision 4 and Submittal of Revision 5"

Letter ENA-FANR-16-0679L, 23 August 2016, "Barakah Nuclear Power Plant Units 1 and 2 – ENEC Response to FANR PPP CP II Rev5 RAIs (FANR-PPP CP2-RAI 8 and FANR-PPP CP2-RAI 9"

Letter ENA-FANR-16-0782L, 23 October 2016, "Barakah Nuclear Power Plant Units 1, 2, 3 and 4 – Submittal of the Physical Protection Plan – Construction Phase II, Revision 5

Letter LRA-FANR-LTR-16-0040, 17 November 2016, "Barakah NPP Unit 1 License Application for Handling and Storage of Unirradiated Nuclear Fuel – Response to RAI 1.0-003"

Letter LRA-FANR-LTR-16-001, October 16 2016, "Barakah NPP Units 1 and 2 Operating License Application – Additional Information for Nawah as the License Applicant and Impact of the Joint Venture"
Letter LRA-FANR-LTR-16-0042, 23 November 2016, "Nuclear Civil Liability and Insurance: Request for Information on the Barakah Unit 1 License Applications Related to Nuclear Liability Insurances"

Letter LRA-FANR-LTR-16-0051, 29 November 2016, "Response to FANR's Mark-ups of the Draft Insurance Policies for Nuclear Third Party Liability Insurance"

Letter ENEC-SGD-COR-00243-2015, Rev A, 15 February 2015, "ENEC Barakah Nuclear Power Plant Units 1, 2, 3 and 4 – License Application for Possession and Use of Nuclear Material"

Letter ENA-FANR-16-0663L, 18 August 2016, "Barakah Nuclear Power Plant Units 1, 2, 3 and 4 – Request for Amended Licence for Possession and Use of Nuclear Material, Licence No. FANR/NM/2015/071"

Letter ENEC-SGD-COR-01595-2016, 8 August 2016, "Barakah Nuclear Power Plant Units 1, 2, 3 and 4 – ENEC Submittal of the Updates to the Design Information Questionnaires (DIQs)".



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