**Description:**

As UAE is embarking upon clean energy sources for power generation - a major shift from its predominantly natural gas based power sector, nuclear power is slated to form one of the building blocks of the new energy policy. The new energy policy of focusing on nuclear and renewable energy sources is intended to address the issues of threatened energy security and rising environmental concerns due to 100% dependence on fossil fuels for power generation. Setting up nuclear and renewable energy based power plants is the part of new energy policy adopted by the UAE government.

UAE's decisive steps for starting nuclear energy programme, as the first country in the GCC region marks a transition in the energy sector as well as the whole economy. This transition is likely to lead the way of sustainable growth and likely to surge economic growth manifold. The plan for embarking on nuclear energy for power generation was discussed in more than 5 petroleum rich countries in the GCC region but the UAE has come as the pioneer in it and going fast to start electricity generation from the first nuclear power generation unit in 2017. As of now, four nuclear power plants with capacity 1400 MW each are being constructed and expected to be operational between 2017 and 2020. In 2012, UAE started the construction of Unit 1 of its first nuclear power plants becoming the first country in 27 years to start a new nuclear reactor.

The approach taken by the UAE to build its first nuclear power plants is based on international best practices, along with the most advanced infrastructure available with necessary modifications to adapt to the conditions in the UAE. The reasons for its smooth and fast progress in planning and construction of the first nuclear power plants in the UAE lie in its strong government commitment, well-organized regulatory bodies including the legal framework and nodal agency to develop, operate and maintain the plants, choosing the right and experiences contractor, international cooperation and efficient management of the national stakeholders.

This report also highlights how the UAE has been successful to offset its lack of technology or expertise in nuclear sector by signing bilateral agreement with several countries and partnering with various international institutions. It is to be noted that the UAE has signed total 27 bilateral agreements for cooperation in planning, setting regulatory framework, in setting safety standards and supply of materials of various kind. The nuclear energy programme strictly adheres to the safety requirements set by the IAEA or other renowned institutions. The progress in nuclear energy programme is being closely monitored and consulted with the IAEA in every step to ensure 100% safety. In order to manage and regulate the entire process, the institutions like Federal Agency of Nuclear Regulations (FANR) and Emirates Nuclear Energy Corporation (ENEC) have been established. Another striking feature of the policy is extensively promoting the educational course curriculums in some top ranked educational institutions in various levels.

**“UAE Nuclear Power Sector Opportunity Analysis” Report Highlight:**

- UAE Energy Policy beyond Oil & Gas
- UAE Nuclear Power Sector Overview
- UAE Nuclear Power Sector Dynamics
- Nuclear Power Sector Management & Regulatory Framework
- Nuclear Power Sector Regulations
- Details of Nuclear Power Plants in UAE
- UAE Nuclear Power Sector Future Outlook

**Contents:**

1. UAE Power Sector Scenario
   1.1 Existing Power Generation Outlook
   1.2 Current & Projected Power Demand

2. Why UAE Energy Policy beyond Oil & Gas?

3. UAE Nuclear Power Sector Overview
   3.1 UAE Entering into Nuclear Power Sector
3.2 Nuclear Policy Overview

4. UAE Nuclear Power Sector Dynamics
   4.1 Favorable Parameters
   4.2 Nuclear Power Sector Challenges

5. Nuclear Power Sector Management & Regulatory Framework
   5.1 Federal Authority for Nuclear Regulations (FANR)
   5.2 National Emergency Crisis & Disaster Management Authority

6. UAE Nuclear Power Sector Regulations
   6.1 Management Systems for Nuclear Facilities
   6.2 Radiation Dose Limits & Optimization of Radiation Protection for Nuclear Facilities
   6.3 Application of Probabilistic Risk Assessment (PRA)
   6.4 Design of Nuclear Power Plants
   6.5 Export & Import Control of Nuclear Material & Nuclear Related Items
   6.6 Existing Exposure Situations
   6.7 License to Operate a Nuclear Facility
   6.8 Radiation Protection & Predisposal Radioactive Waste Management

7. Details of Nuclear Power Plants in UAE

8. UAE Nuclear Power Sector Future Outlook

9. UAE Nuclear Power Sector Conclusion

10. Nodal Agency for Operating Nuclear Facilities: Emirates Nuclear Energy Corporation (ENEC)

List of Figures:
Figure 1-1: UAE - Installed Capacity by Fuel, 2015
Figure 1-2: UAE - Installed Power Capacity (GW), 2010, 2020 & 2030
Figure 1-3: UAE & Global Per Capita Electricity Consumption (kWh), 2015
Figure 1-4: UAE - Power Demand Forecast (GW), 2016-2020
Figure 1-5: UAE - Electricity Generation (TWh), 2014, 2020 & 2030
Figure 2-1: UAE - Share of Nuclear Power in Electricity Generation (%), 2020 & 2030
Figure 2-2: UAE - Projected Electricity Generation by Fuel, 2030
Figure 2-3: Global - Share of Nuclear Energy in Energy Matrix (%), 2015
Figure 5-1: UAE - Rated Capacity & Completed Construction of Nuclear Plants (%)
Figure 7-1: UAE - Share of Clean Energy in Total Energy Mix (%), 2014 & 2021

List of Tables:
Table 4-1: Summary of Major Regulations by FANR

Ordering:
Order Online - [http://www.researchandmarkets.com/reports/3700064/](http://www.researchandmarkets.com/reports/3700064/)
Order by Fax - using the form below
Order by Post - print the order form below and send to

   Research and Markets,
   Guinness Centre,
   Taylors Lane,
   Dublin 8,
   Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct and select the format(s) you require.

Product Name: UAE Nuclear Power Sector Opportunity Analysis
Web Address: http://www.researchandmarkets.com/reports/3700064/
Office Code: SCPLSX4Q

Product Formats
Please select the product formats and quantity you require:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic (PDF) - Single User</td>
<td>USD 1500</td>
</tr>
<tr>
<td>CD-ROM</td>
<td>USD 2000 + USD 57 Shipping/Handling</td>
</tr>
<tr>
<td>Hard Copy</td>
<td>USD 2400 + USD 57 Shipping/Handling</td>
</tr>
<tr>
<td>Electronic (PDF) - Enterprisewide</td>
<td>USD 3000</td>
</tr>
</tbody>
</table>

* Shipping/Handling is only charged once per order.

Contact Information
Please enter all the information below in BLOCK CAPITALS

Title: [ ] Mr  [ ] Mrs  [ ] Dr  [ ] Miss  [ ] Ms  [ ] Prof
First Name: __________________________  Last Name: __________________________
Email Address: * __________________________
Job Title: __________________________
Organisation: __________________________
Address: __________________________
City: __________________________
Postal / Zip Code: __________________________
Country: __________________________
Phone Number: __________________________
Fax Number: __________________________

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:
Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:
Account number 833 130 83
Sort code 98-53-30
Swift code ULSBIE2D
IBAN number IE78ULSB98533083313083
Bank Address Ulster Bank,
27-35 Main Street,
Blackrock,
Co. Dublin,
Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: ____________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:
(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World