**Chapter 6: Information and Social Acceptance Activities**

Social acceptance is a pre-requisite for promoting the new technologies generally and the most important issue in accepting the advanced technologies. In fact, the social acceptance of new technologies in recent decades has increasingly attracted people. The nuclear technology is in its flourishing era and the increased population and willing of environment proponents to use this energy and more familiarity of people with nuclear activities and sciences can pave the way for growing development and flourishing of this industry. Since the power generation from nuclear technology is still a novel technology and also unknown among the different classes of people, drawing-up and development of cognitive framework for current and future activities are required. Therefore, in line with integration, continuity, synergy and purposefulness of activities focusing on paving the way for the social acceptance and increased involvement in nuclear power generation, measures have been taken to achieve the strategies, capacities, executive steps, methods and operating procedures on the objectives horizon.

**Introduction**

Since March 2020 to March 2021, like the past years, the cultural activities were organized and implemented as per the NPP comprehensive cultural program as well as the decrees of NPP Cultural Council in various fields such as Quran, Prayer, altruism and resistance, advertising and art, social communications with personnel, their families, organizations and the public.

**Activities of information and social awareness-raising**

In view of the pandemic COVID-19, a part of programs already held with presence of a large number of personnel and their families were conducted limitedly or virtually due to observing the health protocols among them the most important are as below:

1. **Holding the primary and final stages of the 9th Quran competition of nuclear industry**

In this competition, 86 personnel of Bushehr NPP and their families competed in different fields of memorization, recitation, and concepts with meeting completely the health protocols and at the end, the top participants went to the national competition.

1. **Holding the religious ceremonies in the prayer rooms of plant site and residential camp with meeting the health protocols**

When the prayer rooms were temporarily closed because of the limitations imposed by the pandemic COVID-19 and reopened by applying the health protocols, the national and religious ceremonies were held with presence of personnel within the framework of speech and preaching.

1. **Designing, printing and posting the banners and posters in plant site and residential camps for national and religious occasions**

To honor the national and religious occasions, the environmental advertisings were made in the form of flags, designing and printing the banners, … and posting them on billboards and portables inside and outside the plan as well as the notice boards at working places and loading them on the TVs installed in the site.

1. **Developing, printing and sending the postal cards to the personnel recently married or have newly-born child**

On the basis of decrees of NPP Cultural Council to popularize the tradition of marriage and encourage to have more children, postal cards were presented to those colleagues who have recently married or had newly-born child. It is noteworthy that during the past years, this program were held with presence of plant manager and a number of managers and personnel which was virtually conducted within March 2020 – March 2021 because of the limitations imposed due to the pandemic COVID-19.

1. **Printing the announcement and sending banners for condolences to the family of personnel who have lost their relatives**

In order to sympathize and console the colleagues who have lost a member of family, a condolence banner was designed, printed and sent to his home by cooperation and counseling with one of the advertising agencies.

1. **Holding the cultural competitions (painting, photography, …) for personnel and their families**

During the different months, cultural competitions were held within the painting, photography, making clips, designing and distributing questions and holding the written competition, …. among which, Ramadan competition, annual competition for summer with various subjects, … can be mentioned.

1. **Appreciating the medical crew in the plant medical center of Shahed for their efforts during the pandemic COVID-19**

Regarding the pandemic COVID-19 and double efforts by the medical crew, plant manager together with a number of managers attended the medical center of Shahed and presented gifts to nurses and physicians working there.

1. **Gathering and sending the aids of personnel to the damaged regions of Sistan-and-Baluchestan flood and Sisakht earthquake**

Because of the natural disasters in the country (flood in Sistan-and-Baluchestan and earthquake in Sisakht) and necessity of helping to the damaged people and sympathizing with them, an announcement on gathering the financial aids for them was posted in the TVs, portal, information boards, … and the applicants donated by filling the related forms.

1. **Preparing the financial aids of NPP personnel for those under the support of Relief Committee including presenting 30 tablets**

Aiming at helping the needy families, particularly during the pandemic COVID-19, Bushehr NPP personnel presented their aids in cash or by purchasing goods to the Relief Committee, including 30 tablets for facilitating the education of students under the support of this organization.

1. **Teacher’s day ceremony and appreciating the teachers of schools of residential camp and villages of Haleileh and Bandargah**

In line with honoring the high status of teacher, concurrent with 2 May, the martyrdom anniversary of Morteza Motahhari and teacher’s day, the educational crew of schools of Morvarid residential camp and Haleileh and Bandargah villages were appreciated. It should also be noted that during the past years, this ceremony was held with presence of plant manager and a number of managers; so, because of the pandemic COVID-19, the presents were submitted to the schools.

1. **Honoring the Physician’s and Nurse’s day and appreciating the medical staff**

Concurrent with the birth of Zeynab bint Ali and nurse’s day, plant manager and a number of managers attended Shahed Clinic and appreciated their efforts and presented them gifts.

1. **Honoring the birth of Fatimah bint Muhammad and woman’s day and appreciating the women working at BNPP**

O the occasion of birth anniversary of Fatimah bint Muhammad and woman’s day, the women working at Bushehr NPP were appreciated by presenting cultural package. This ceremony was held with presence of women earlier which was held virtually this year due to the limitations of COVID-19.

1. **Holding the ceremonies of Government Week and appreciating the top employees and celebrating the retired of Bushehr NPP.**

On the occasion of Government Week and concurrent with the employee’s day, the ceremony of Government Week and appreciating the top employees was held and the retired of Bushehr NPP were celebrated and the top employees received their gifts from the managers. Unlike the previous year that this ceremony was held in the gathering hall, it was celebrated merely with presence of managers and the top employees in the working offices and the ceremony was covered by the internal network.

1. **Preparing, sending/delivering the cultural packages of Age of Discernment to those girls reaching this age in schools of residential camp and villages of Haleileh and Bandargah and 9-year-old daughters of personnel**

Each year, with presence of all girls reaching the age of discernment as well as the girl students of schools of residential camp and villages of Haleileh and Bandargah, a ceremony is held attending by plant authorities with different programs which was held remotely by sending the cultural packages to the related schools and a symbolic ceremony was held with presence of a short number of students with meeting the health protocol in a school.

1. **Dispatching the families of NPP martyrs’ to Mashhad, congratulating the occasions and presenting the cultural gifts to them**

In order to honor the personnel and families of the NPP martyr and offering services to them in various religious and national days such as the Scared Deface week, the Veterans’ day, …., messages are sent to them and visits are made with them continuously. Families of the plant martyrs are also dispatched to Mashhad.

1. **Holding the exhibition simultaneously with the Sacred Defense Week**

In order to promote the culture of sacrifice and horning the Sacred Defense week, flags and banners were installed in the plant and an exhibition was held for this occasion with pictures of the 8-year imposed defense, … at a point in BNPP site.

**Preparing and distributing the cultural packages for the personnel of foreign contractor on the occasion of New Year**

On the occasion of birth anniversary of Jesus and New Year, gifts and cultural packages were provided and presented to the personnel of foreign contractor with presence of plant director and managers.

**Appreciating the servants of prayer rooms of plant site and residential camp**

In order to show respect to the servants of prayer rooms to create and maintain a proper and desired atmosphere in this religious locations and offering good services to the personnel, those who were active in prayer area and prayer rooms of BNPP site and Morvarid residential camp were appreciated by offering cultural packages.

Following the pandemic COVID-19 and closing the sport complexes, the Sport Affairs department embarked on opening the sport halls in two stages, i.e. July and October 2021. But due to the increased prevalence of diseases all activities were closed down again. After the approval of the 3rd meeting of committee of supervising on the health of sport clubs and places of the Bushehr General Department of Sport and the Youth, the health and welfare committee of BNPP convened a meeting and it was decided that after filling the form and public registration, all hall and open sport activities including , table-tennis, tennis, badminton, skate, mountaineering, yoga, physical preparation, aerobic, gymnastics, football,, volleyball and basketball, in both male and female parts in the sport halls of Morvarid residential camp can be started with meeting the related rules. Over 410 persons took part in the sport activities.

1. Revising the code of ethics for sport affairs in March 2020;
2. Making the required coordination for attendance of TAPNA basketball team in the competition of national league;
3. Holding the family mountaineering plan to Khaeiz region attended by 83 persons;
4. Holding the scientific – sport competition of BNPP personnel attended by 120 participants and presenting gifts to 15 persons by random;
5. Hosting the coaching course of women beach volleyball for 8 days in Morvarid residential camp with presence of 50 person from all over the country;
6. Hosting the provincial competitions of archery for men and women attended by 45 persons;
7. Holding the 2nd stage of family mountaineering to Shahneshin Mountain attended by 35 persons;
8. Holding the Fajr Decade competitions attended by 430 persons for one month (for women: badminton, aerobic, table-tennis, archery, suspension sports, chess, gymnastics, skate, physical and psychological health, dart and physical preparation and for men: football, volleyball, table-tennis, chess, physical preparation, soil tennis, badminton, basketball, football school, dart and archery).
9. Specialized mountaineering program to Beirami mountain attended by 14 persons;
10. Hosting the provincial archery competitions for men and women on the occasion of Bushehr’s Day attended by over 40 persons in Morvarid residential camp

**Supporting the theses**

Aiming at meeting a part of research – developmental needs required by the nuclear reactors with an approach to respond a part of scientific needs by universities and national scientific and research centers, "Committee of Supporting the Theses and Educational Articles of Higher Education and PhD Students of Universities and Scientific Centers" was formed whose general goals are as below:

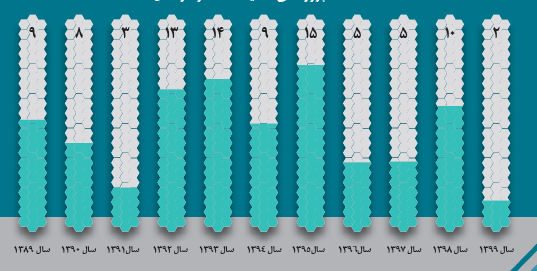
* Identifying, organizing and supporting the research activities of universities and national scientific centers in technical, economic, and managerial fields and other cases related to the NPPs;
* Encouraging and motivating the students to research in the technical, economic, and managerial fields and other cases related to the NPPs;
* Expanding the communications and constructive interactions between the company and universities aiming at the maximal use of their scientific capabilities and mutual promotion to use the scientific capacities of national universities in line with meetings the research and operation needs of company;

Every year and before start of educational year of universities and national scientific and educational centers, the research needs of nuclear reactors are collected systematically and once the expert reviews are made, the extracted titles are gathered within a "guide to support the higher education theses and military service reduction projects in NPPs fields" and published; then, a copy od this booklet together with designed poster is submitted to the research division of universities and national scientific and educational centers so that the professors and students can use. In order to facilitate the access for the interested public, the electronic version of booklet and the needed forms are uploaded on the website of NPPD Co. of Iran ([www.nppd.co.ir](http://www.nppd.co.ir)).

Since the late 2019 till now, 91 research were contracted after various expert reviews from among the received proposals and 3.1 billion Rials was allocated to support these studies.

The trend of proposing the projects is not the same every year for different reasons and faces the increase and decrease of applicants per year. For example, regarding the pandemic COVID-19 and virtual education in universities from March 2020 to March 2021, only two cooperation contracts were concluded with the applicants, but in average, 9 researches are supported per year.

**Number of projects supported each year**



ترتیب سالها از چپ به راست

2010-2011

2011-2012

2012-2013

2013-2014

2014-2015

2015-2016

2016-2017

2017-2018

2018-2019

2019-2020

2020-2021

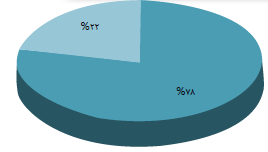
Among the applicants for conducting the studies, the students of nuclear engineering and energy engineering had the highest demand for cooperation and conducting the studies.

**Researchers' Field of Study**

|  |  |  |  |
| --- | --- | --- | --- |
| Field of study | Percentage | Field of study | Percentage |
| Nuclear Engineering | 40 | Geophysics | 1 |
| Energy Engineering | 12 | Basic Sciences, Nuclear Physics | 1 |
| Mechanical Engineering | 7 | Marine Physics | 1 |
| Novel Technology and Science | 5 | Physics | 1 |
| Technical & Engineering | 4 | Metallurgy and Materials | 1 |
| Social Communication Sciences | 2 | English Translation | 1 |
| Basic Sciences | 2 | Commercial Management | 1 |
| Earthquake Engineering | 2 | Public Management | 1 |
| Industrial Management | 2 | Governmental Management | 1 |
| Civil Engineering | 2 | Business Management | 1 |
| Environmental Pollutions | 1 | Consultancy | 1 |
| English Teaching | 1 | Mechanics | 1 |
| Accounting & Management | 1 | Electrical Engineering | 1 |
| Faculty | 1 | Industrial Engineering | 1 |
| Technical & Engineering Faculty | 1 | Architecture Engineering | 1 |

The scientific level of the research projects conducted as per the demands of departments and students referral are shown below:

**scientific level of the research projects**





PhD

MA

The manual of guide to support the higher education theses and military service reduction projects in the field of NPPs is submitted to over 30 credible and reference universities across the country among which Sharif University of Technology and Islamic Azad University (various branches) had the most contracts to conduct the studies.

Percentage of universities' participation

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Percentage | Name | Percentage |
| Sharif University of Technology | 24 | Hormozgan University | 1 |
| Islamic Azad University | 28 | Persian Gulf University | 2 |
| Arak University | 1 | University of Sadrolmote'allehin (Sadra) | 2 |
| Imam Khomeini University | 1 | University of Nasir al-Din al-Tusi | 3 |
| Tehran University | 1 | Allameh Tabataba'i University | 3 |
| Kharazmi University | 1 | Shahid Beheshti University | 5 |
| Bahonar University of Kerman | 1 | Sahand Industrial University | 6 |
| Kashan University | 1 | Isfahan University | 7 |
| Mazandaran University | 1 | Shiraz University | 8 |
| Science and Culture University | 1 |  |  |
| Amir-Kabir University of Technology | 1 |  |  |

**Publishing the documentations of Information Field**

* Developing and publishing the manual of guide to support the higher education theses and military service reduction projects in the field of NPPs, 10th edition;
* Developing and publishing the report on performance of Bushehr NPP power generation in two stages: March to September 2020 and early 2021.
* Publishing the magazine “Development News” every two months (6 volumes since March 2020 to March 2021)
* Developing and publishing the annual report of nuclear power production and development of Iran

Bu**shehr NPP Evolution Trend**

* 1975: Starting the executive operations of constructing two power units by KWU Company
* 1980: After Iran Revolution: Stopping the executive activities of constructing two units by German KWU Co.
* January 1995: Concluding the Contract for completing the first Unit of Bushehr NPP with 1000 MW with the Russian Party
* September 1998: Starting the executive operations for completing the first Unit of Bushehr NPP
* Up to 2004: Construction activities and manufacturing main equipment in Russian factories
* December 2007: Entering the fuel into the NPP
* June 2009: 35 Bar Test in primary circuit
* November 2009: 250 Bar Test in primary circuit
* December 2009: 110 Bar Test in secondary circuit
* January 2010: Conducting the containment test
* April 2010: Starting hot-run test
* May 2011: reactor criticality (Start of reactor activity)
* August 2011: NPP turbine with 3000 rpm
* September 2011: first connection of generator to the national grid
* August 2012: Reaching 100% reactor power and delivering 1000 MW electricity to the national grid
* September 2013: temporary delivery of the first Unit to the Iranian Operator and commercial generation of electricity
* February 2014: First Bushehr NPP-1 refueling
* September 2015: Second Bushehr NPP-1 refueling
* May 2016: permanent delivery of NPP to the Iranian operator
* January 2017: Third Bushehr NPP-1 refueling
* February 2018: Fourth Bushehr NPP-1 refueling
* January 2019: Fifth Bushehr NPP-1 refueling
* April 2019: Reconnecting the plant to the national grid
* April 2020: Sixth Bushehr NPP-1 refueling
* June 2020: Reconnecting the plant to the national grid

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