
Project Management update from Argentina



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An Argentine mega-project is gaining visibility throughout the region: The nuclear reactor “Atucha II” reached 50 percent of its power on Tuesday July 22, and is providing 330 megawatt-hours of energy to the Argentine System (SADI) and in November plans to reach its 100 percent when the central delivers 745 megawatt/hour.

The Nuclear Power plant is based on natural uranium and heavy water, “Atucha II” located on the right bank of the River Paraná de las Palmas in the city of Lima (115 km north from Buenos Aires capital), has started producing power last June, initially generating a few megawatt/hour and from June 27 reaching 30 percent of its power. With the entry into this trade regime, this nuclear power plant is going to produce the equivalent to the energy consumed by about 3 million people and is expected to replace some of the fuel imports that the country is using today.

“Atucha II” is a modern nuclear plant, similar to the recently constructed plants in Germany, as well as in Spain “Trillo” and “Angra II” in Brazil, built in accordance with the construction licenses, standards and programs of inspection timely defined by the Argentina's Nuclear Regulatory Authority (ARN).

From the point of view of design and construction it has upgraded security systems, which include the concept of defense in depth with successive barriers, containment sphere, physical separation of redundant safety systems, and service monitoring program, among other items



Photo: Aerial view of the Nuclear Central - Atucha II

The project completion and implementation of “Atucha II” has been developed by the company Nucleoeléctrica Argentina SA (NA-SA), composed by 79% by the Department of Energy's Office, 20% by the Atomic Energy National Commission and 1% by the Binational Entity of Energy Ventures. The Management was given by the Engineer José Luis Antunez.

This company also manages the production and sale of energy generated by the other two of the three nuclear power plants that are in Argentina, “Atucha I” and “Embalse” totaling 1,750 megawatts hour.

Besides the own benefit of energy production for the country, having completed this project is an important milestone since it was suspended on more than one occasion, the last for over 10 years. The cornerstone of “Atucha II” was placed in 1980, but the project was stopped in 1994 and re-launched in 2006, when the Government reignited the Argentine Nuclear Plan.

One of the challenges presented in the project, commented the engineer Miguel Angel Baez, Construction Manager NA-SA, was to preserve the components that had been previously acquired prior to the period of suspension of the project, during the years 1994-2006. Subsequently, another problem proved that some materials, parts and

elements were degraded by the passage of time, others were no longer compatible with the new regulations, and some had become obsolete or did not have support from their original suppliers.

All this, coupled with the decision of the authorities to complete the construction of the plant with the latest technology, motivated the need for repair and replacement of some components, involving costs that were not covered in the budget.



Photo: Engineer Miguel Ángel Baez in the Project War Room

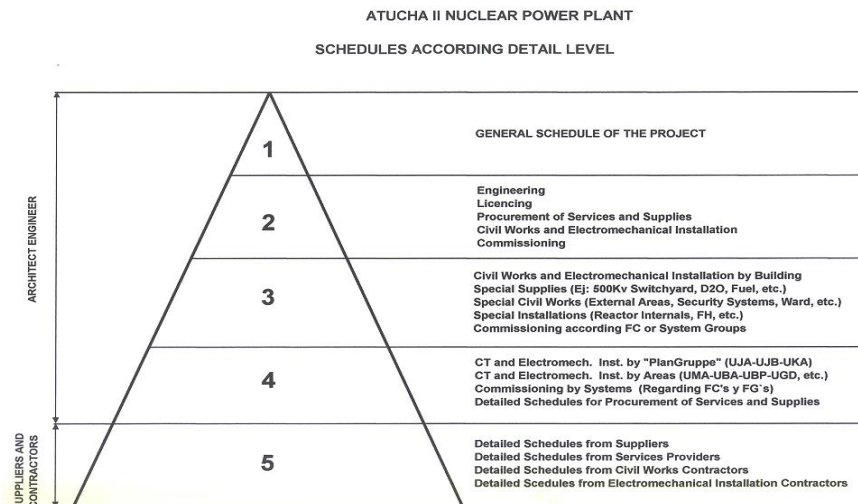
To complete “Atucha II”, Nucleoeléctrica Argentina S.A. coordinated the implementation of detailed work plans with over 150,000 activities including engineering, construction and assembly.

The Manager of Planning and Control of NA-SA, Engineer José Camilo Salla, explained that they have developed 5 levels of timelines, from the first level with the overall project schedule, to the most detailed level of product suppliers, services and contractors of civil and electromechanical works at level 5.

As part of the project has built a 1:25 scale model in representing all components of the nuclear plant in detachable modules that allowed a detailed study of parts and proper planning of the construction and assembly sequences.



Photo: Engineer José Camilo Sala in the Project War Room



Graphic: Schedule Hierarchy by level of detail for the Nuclear Power Plant "Atucha II"

From the point of view of Human Resources, restarting the project required a look for technical and specialized professionals who had been separated with the suspension of the works, as well as contractors and suppliers, train welders and high quality nuclear plant assemblers among other specialties who had disappeared in the Argentine market, recovering national capacities for the design and construction of nuclear power plants in the country.

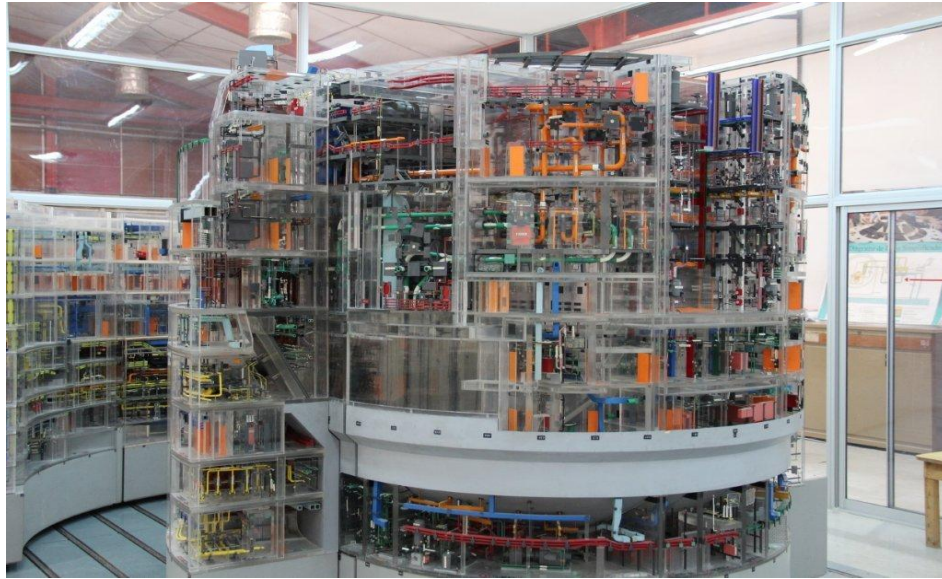


Photo: Model Scale 1:25 of the Nuclear Power Plant “Atucha II”

To understand the magnitude of this mega-project, we can mention that the work has demanded among other metrics, 190,000 m³ of concrete, 31,000 tons of materials and equipment, 4,000 tons of pipes, 700,000 welds, 2,500 km of cables, 1 million connection points, 12,000 instruments, 42 million man hours of engineering, construction, installation and commissioning, with a peak of 7,200 people employed directly in a project with 720 work fronts, 15,000 contracts and purchase orders, 1,400,000 documents and a total investment since its relaunch of 18,000 million pesos (about 3.8 billion).



Photo: Main Control Room of the Nuclear Power Plant “Atucha II”.

Federal Planning Minister Julio De Vido said that the nuclear sector is ready to face new challenges as the fourth nuclear power plant, which charged a strong impetus with the agreements that Argentina and China signed last week, the extension of life of the “Embalse” Nuclear Power Plant and the construction of power reactor “CAREM”, 100% made in Argentina by the National Atomic Energy Commission.



Photo: Team of the Planning and Control of NA-SA



Photo: Cecilia Boggi on her visit to the Nuclear Power Plant “Atucha II”

For more information about the Nuclear Power Plant “Atucha II” visit: <http://www.na-sa.com.ar/centrales/atucha2>

About the Author



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Cecilia Boggi, PMP is founder and Executive Director of activePMO, giving consulting services and training in Project Management and Leadership skills in Argentina and Latin America.

After graduating with a degree in Computer Science Engineering from Universidad de Buenos Aires, Argentina, she has managed software development projects and PMO implementation projects for more than 20 years both in the government and private sector. Cecilia also has graduated from an Executive Program in Business Management at Universidad del CEMA. She holds the Project Management Professional (PMP®) credential since 2003, is certified as SDI Facilitator from Personal Strengths© and is alumni of the PMI Leadership Institute Master Class 2012. Ms. Boggi is Past President of the PMI Buenos Aires Argentina Chapter, and is a founding member of the PMI Nuevo Cuyo Chapter and PMI Santa Cruz Bolivia Chapter. She has been designated by PMI in the role of Mentor of Region 13, Latin America South, for the years 2014-2016. Cecilia has participated in the development of PMBOK® Guide 5th Edition, leading the Chapter 9, Human Resource Management, content team and she is professor of Project Management in some Universities and Institutes in Argentina, Chile, Peru and Bolivia.

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