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Drafting and Preparation of Proposals of Irradiation Plants: Mexico Experience

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The drafting, integration and evaluation of infrastructure projects face huge challenges. Each Project has a relevance and a unique nature, although, they are developed in conditions and environments more or less similar.

This paper describes different progress that were accomplished in drafting, integrating and evaluating various projects focused to specify, design, build and commissioning industrial irradiation plants based on electron beam in mexican territory.

Having as a background the experience that ININ has gained since 1980, when its Gamma Industrial Irradiation plant was commissioned and 1983, when its commercial operation started, the key elements required to take into account related with the installation of new irradiation plants based on electron beam are:

- 1)The market demand that justifies the need to have the facility.
- 2)Other additional key drivers that strength the arguments to install a new facility.
- 3)The different kinds of regulations, the legal framework, types of technologies and the particular requirements of industries wherein the supply of irradiation services will be focused like medical disposables and food products.
- 4) The technical details to fulfill the specification of irradiation service that the facility will offer to the customers: desired effects on materials, uniformity and range of doses, guarantee, quality control and complementariy services like microbiological analysis or dose mapping, risk management among users and services by the supplier.

As a result of the main considerations just mentioned, it may be possible to have a solid basement to draft, integrate and evaluate a new project. The next step should be the cost-benefit analysis taking into account aspects related with market study, the legal framework and a sensitivity analysis. Costs of the project should be treated with the sufficient detail according with the level of development of the Project.

From what was mentioned above, any organization has the possibility to define the technical characteristics of the main equipment, basically, the e-beam accelerator required: energy, e-beam or e-beam and X rays, power, type of technology (Linac, RF), among others.

The experience shows that if at the very beginning exists uncertainty about the financial resources for the project, it is very convenient to have alternatives available since the very early stages to face changes on the scope and on the specific requirements of diverse budget sources, these issues could assure the suces of the project.

Country/Organization invited to participate

Mexico

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