

# Postgraduate Certificate Development, Financing, and Feasibility of Renewable Energy Projects





## Postgraduate Certificate Development, Financing, and Feasibility of Renewable Energy Projects

- » Modality: **online**
- » Duration: **6 weeks**
- » Certificate: **TECH Global University**
- » Accreditation: **6 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: [www.techtute.com/us/engineering/postgraduate-certificate/development-financing-feasibility-renewable-energy-projects](http://www.techtute.com/us/engineering/postgraduate-certificate/development-financing-feasibility-renewable-energy-projects)

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# 01

# Introduction

Renewable Energies are undoubtedly on the rise and increasingly this market requires specialized professionals who know how to manage them and choose those that are best in each case. Aware of this, TECH professionals have designed this very complete academic itinerary that aims to teach engineers how to implement an energy innovation project, explaining in depth the different stages of a renewable asset, from its initial phase to its operation, including evaluation and financing. This knowledge will allow the professional to take part in projects of high importance, revaluing his professional profile.



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*With TECH you will learn to design and implement energy innovation projects. This will be a key competency to take your professional profile to the next level"*

The Renewable Energy sector is in full international expansion and is increasingly demanding engineers specialized in this field. Therefore, the best professionals in the field have designed for TECH this complete Postgraduate Certificate that aims to prepare professionals with high knowledge in everything that encompasses the renewable energy sector, to increase their working position in today's energy market.

This education will explore the different stages of a renewable project, from its initial phase to its operation, including its evaluation and financing. The Postgraduate Certificate will begin with a description of the most important actors involved in the development, construction and operation of a renewable asset.

The following is an in-depth breakdown of the different stages of a project; from pre-feasibility analysis to "Ready to Build", detailing the main permits, licenses and authorizations required. Additionally, the different evaluations to sell or finance a project will be discussed in detail: technical, legal and financial.

On the other hand, the financial fundamentals that allow understanding how to value and finance projects or companies related to renewable energies will be detailed. Regarding financing, "Project Finance", its structuring and associated risks will be studied in more detail.

Finally, a fundamental part will be explained: how the assets in operation are managed, both technically and financially, including insurance and *claim management*.

For all these reasons, this Postgraduate Certificate in Development, Financing and Viability of Renewable Energy Projects integrates the most complete and innovative educational program in the current market in terms of knowledge and latest available technologies, as well as encompassing all the sectors or parties involved in this field. In addition, the Postgraduate Certificate consists of exercises based on real cases of situations currently managed or previously faced by the teaching team.

This **Postgraduate Certificate in Development, Financing and Viability of Renewable Energy Projects** contains the most complete and up-to-date program on the market.

The most important features include:

- ◆ The development of case studies presented by experts in Renewable Energies
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Improving your skills in Renewable Energies will give you a boost to your professional career, with greater intervention capacity and better results"*

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*The design and implementation of innovation projects in the energy field is a complicated task and requires highly skilled engineers. Learn with TECH the necessary skills in this field"*

The program's teaching staff includes professionals from the sector who contribute their work experience to this specializing program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this, professionals will have the help of an innovative interactive video system made by recognized experts in engineering with great experience.

*TECH puts in your hands the most competitive and complete didactic material in the sector. This way, you will be sure to learn with the best information.*

*A 100% online program that will allow you to combine your studies with the rest of your daily activities.*



# 02

# Objectives

TECH has designed this very complete Postgraduate Certificate with the objective of providing engineering professionals with the knowledge to be able to design, implement and work on innovation projects in renewable energies, knowing in depth everything related to this industry and the aspects of sustainability and climate change in the international arena that directly affect it. To this end, specific aspects of energy systems that stand out for their enormous importance in today's business landscape will be addressed, and for which large corporations are increasingly demanding competent engineers with a solid specialized education.





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*With this program, TECH has only one goal: to help you grow in your profession and become a prestigious engineer”*



## General Objectives

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- ◆ Conduct an exhaustive analysis of current legislation and the energy system, from electricity generation to the consumption phase, as well as the fundamental production factor in the economic system and the functioning of the different energy markets
- ◆ Identify the different phases required for the feasibility and implementation of a renewable energy project and its commissioning
- ◆ Analyze in depth the different technologies and manufacturers available to create systems for the exploitation of hydraulic energies, and to distinguish and critically select those qualities according to costs and their actual application
- ◆ Identify the operation and maintenance tasks required for the correct operation of Renewable Energy facilities
- ◆ Size facilities for the application of all energy sources of lesser implementation such as mini-hydro, geothermal, tidal and clean vectors
- ◆ Manage and analyze relevant bibliography on a topic related to one or some of the fields of Renewable Energies, published both nationally and internationally
- ◆ Adequately interpret society's expectations on the environment and climate change, and engage in technical discussions and critical opinions on energy aspects of sustainable development, as skills that Renewable Energy professionals should have
- ◆ Integrate knowledge and face the complexity of formulating reasoned judgments in the field applicable to a company in the renewable energy field
- ◆ Master the different existing solutions or methodologies for the same problem or phenomenon related to Renewable Energies and develop a critical spirit knowing the practical limitations





## Specific Objectives

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- ◆ Gain in-depth knowledge and analyze the technical documentation of renewable energy projects required for their feasibility, financing and processing
- ◆ Manage technical documentation up to the "Ready to Build" step
- ◆ Establish types of financing
- ◆ Understand and carry out an economic and financial study of a renewable energy project
- ◆ Use all the tools for project management and planning
- ◆ Master the part of insurance involved in the financing and viability of renewable energy projects, both in their construction and operation phases
- ◆ Delve into the processes of valuation and appraisal of claims in renewable energy assets

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*A program designed through practical cases that will teach you how to act in real situation in daily practice in your profession”*

# 03

# Course Management

TECH follows strict criteria for all its educational programs. This guarantees students that by studying here they will find the best educational content taught by the best professionals in the sector. In this sense, this Postgraduate Certificate in Development, Financing and Viability of Renewable Energy Projects has highly prestigious professionals within this area, who pour into the education the experience of their years of work, as well as the knowledge acquired from research in the field. All to provide the engineer with a high-level program, which will enable them to practice with greater guarantees of success.





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*Learn with the best and acquire the knowledge and skills you need to intervene in this area of development with total success"*

## International Guest Director

Varun Sivaram, Ph.D. is a **physicist, bestselling author** and leading **clean energy technology** expert with a career spanning the corporate, public and academic sectors. In fact, he has served as **Director of Strategy and Innovation at Orsted**, one of the world's leading renewable energy companies with the largest offshore wind power portfolio.

In addition, Dr. Sivaram has served in the U.S. Biden-Harris administration, as Director General for Clean Energy and Innovation, as well as Senior Advisor to Secretary John Kerry, the Special Presidential Climate Envoy to the White House. In this capacity, he was the creator of the First Movers Coalition, a key initiative to foster clean energy innovation globally.

In the academic field, he has directed the Energy and Climate Program at the Council on Foreign Relations. And his influence in the formulation of government policies to support innovation has been remarkable, having advised leaders such as the mayor of Los Angeles and the governor of New York. He has also been recognized as a Young Global Leader by the World Economic Forum.

In addition, Dr. Varun Sivaram has published several influential books, including "Taming the Sun: Innovations to Harness Solar Energy and Power the Planet" and "Energizing America: A Roadmap to Launch a National Energy Innovation Mission", both of which have received accolades from prominent leaders such as Bill Gates. In fact, his contribution to the clean energy field has been recognized internationally, being included in the TIME 100 Next list and incorporated by Forbes in its Forbes 30 Under 30 list in Law and Policy, among other major accolades.



## Dr. Sivaram, Varun

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- Director of Strategy and Innovation at Ørsted, United States
- Managing Director, Clean Energy and Innovation // Senior Advisor to Secretary John Kerry, U.S. Special Presidential Climate Envoy at The White House
- Chief Technology Officer at ReNew Power
- Strategic Advisor for Energy and Finance on Reforming the Energy Vision at the New York Governor's Office
- Ph.D. in Condensed Matter Physics from Oxford University
- B.S. in Engineering Physics and International Relations from Stanford University.
- Awards: Forbes 30 Under 30, awarded by Forbes magazine  
Grist Top 50 Leaders in Sustainability, awarded by Grist magazine  
MIT TR Top 35 Innovators, awarded by MIT Tech Review Magazine  
TIME 100 Next Most Influential People in the World, awarded by TIME Magazine
- Young Global Leader, awarded by the World Economic Forum
- Member of: Atlantic Council ,Breakthrough Institute , Aventurine Partners



*Thanks to TECH, you will be able to learn with the best professionals in the world"*

## Guest Director



### Mr. De la Cruz Torres, José

- ♦ Engineer in the Energy and EE Division RR. at RTS International Loss Adjusters
- ♦ Engineering Expert at IMIA - International Engineering Insurance Association
- ♦ Technical-Commercial Director at Abaco Loss Adjusters
- ♦ Master's Degree in Operations Management by EADA Business School Barcelona
- ♦ Master's Degree in Industrial Maintenance Engineering, University of Huelva
- ♦ Course in Railway Engineering by the UNED
- ♦ Degree in Physics and Industrial Electronics Engineering, University of Seville

## Management



### Mr. Lillo Moreno, Javier

- ♦ Expert Engineer in the Energy Sector and O&M Manager
- ♦ Responsible for Solarig's Maintenance Area
- ♦ Responsible for the Integral Service of ELMYA Photovoltaic Plants
- ♦ Project Manager at GPtech
- ♦ Telecommunications Engineer, University of Seville
- ♦ Master's Degree in Project Management and Master's Degree in Big Data & Business Analytics, School of Industrial Organization (EOI)





## Professors

### Mr. Serrano, Ricardo

- ◆ Territorial Director of Andalusia, Willis Towers Watson
- ◆ Musini Regional Director
- ◆ Technician in brokerage companies: AON, MARSH Insurance Broker & Risk Management and Willis Towers Watson
- ◆ Design and placement of insurance programs for renewable energy companies and other industrial activities such as Abengoa, Befesa, Atalaya Riotinto, etc.

### Mr. Granja Pacheco, Manuel

- ◆ International Business Development Director at Progressum Energy
- ◆ Wind Energy Site Manager at Better
- ◆ Civil Engineer, Alfonso X El Sabio University
- ◆ Master's Degree in Renewable Energy Facilities Management and Project Internationalization from CEU San Pablo University

# 04

## Structure and Content

The syllabus of the Postgraduate Certificate is structured as a comprehensive tour through each and every one of the concepts required to understand and work in this field. Therefore, through a novel didactic approach, based on the practical application of the contents, the engineer will learn and understand the functioning of the renewable energy market, knowing how to design and implement projects in this sense, and providing high levels of safety and services to the companies. This, in addition to adding value to your professional profile, will make you a much better prepared professional to work in a variety of environments.





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*A comprehensive syllabus focused on acquiring knowledge and converting it into real skills, created to propel you to excellence"*

## Module 1. Development, Financing and Feasibility of Renewable Energy Projects

- 1.1. Identification of Stakeholders
  - 1.1.1. Developers, Engineering Firms, and Consultants
  - 1.1.2. Investment Funds, Banks and Other Stakeholders
- 1.2. Renewable Energy Project Development
  - 1.2.1. Main Stages of Development
  - 1.2.2. Key Technical Documentation
  - 1.2.3. Sales Process. RTB
- 1.3. Evaluation of Renewable Energy Projects
  - 1.3.1. Technical Feasibility
  - 1.3.2. Commercial Feasibility
  - 1.3.3. Environmental and Social Feasibility
  - 1.3.4. Legal Feasibility and Associated Risks
- 1.4. Financial Bases
  - 1.4.1. Financial Knowledge
  - 1.4.2. Analysis of Financial Statements
  - 1.4.3. Financial Modeling
- 1.5. Economic Valuation of Renewable Energy Projects and Companies
  - 1.5.1. Valuation Fundamentals
  - 1.5.2. Valuation Methods
  - 1.5.3. Calculation of Profitability and Financing Potential of Projects
- 1.6. Financing of Renewable Energies
  - 1.6.1. Project Finance Characteristics
  - 1.6.2. Financing Structuring
  - 1.6.3. Risks in Financing
- 1.7. Renewable Asset Management: Asset Management
  - 1.7.1. Technical Supervision
  - 1.7.2. Financial Supervision
  - 1.7.3. Claims, Permits Supervision, and Contract Management





- 1.8. Insurance in Renewable Energy Projects. Construction Phase
  - 1.8.1. Developer and Builder. Specialized Insurance
  - 1.8.2. Construction Insurance (CAR)
  - 1.8.3. Professional Liability Insurance
  - 1.8.4. Advance Loss of Profit (ALOP) Clause
- 1.9. Insurance in Renewable Energy Projects. Operation and Exploitation Phase
  - 1.9.1. Property Insurance. Multi-risk (OAR)
  - 1.9.2. Contractor's O&M Insurance (Liability or Professional Liability)
  - 1.9.3. Appropriate Coverage. Consequential and Environmental Losses
- 1.10. Valuation and Assessment of Damage in Renewable Energy Assets
  - 1.10.1. Valuation and Industrial Assessment Services: Renewable Energy Installations
  - 1.10.2. Intervention and Policy
  - 1.10.3. Material Damage and Consequential Loss
  - 1.10.4. Types of Claims: Photovoltaic, Solar Thermal, Hydroelectric, and Wind



*A unique learning opportunity that will catapult your career to the next level. Don't let it slip away"*

05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*





*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



06

# Certificate

The Postgraduate Certificate in Development, Financing, and Feasibility of Renewable Energy Projects guarantees, in addition to the most accurate and up-to-date knowledge, access to a Postgraduate Certificate issued by TECH Global University.



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*Successfully complete this program  
and receive your university qualification  
without having to travel or fill out  
laborious paperwork”*

This program will allow you to obtain a **Postgraduate Certificate in Development, Financing, and Feasibility of Renewable Energy Projects** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University**, is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University title**, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Development, Financing, and Feasibility of Renewable Energy Projects**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost..





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