iThEC (www.ithec.org) is an independent non-profit association founded in Geneva in 2012 under the auspices of **Carlo Rubbia**, laureate of the 1984 Nobel Prize in Physics and former Director-General of CERN[1], with the aim of promoting thorium as a means of energy production and nuclear waste reduction.

iThEC MANIFESTO

May 2026

The **International Thorium Energy Committee** (iThEC) wishes to draw attention to the urgent need to develop thorium technologies today, in order to be able to take over, by around 2050, from nuclear energy production based on the uranium cycle. The challenge is to ensure Europe's energy sovereignty through abundant, safe energy production, without greenhouse gas emissions, while overcoming the issues of energy dependency and nuclear waste.

In recent years, faced with the explosion in electricity demand across all sectors (artificial intelligence, data transmission and storage, robotics, transport, heating, air conditioning, etc.), the difficulty of phasing out fossil fuels, and the need for a high–energy-density source that is abundant, safe, cost-effective and sovereign, nuclear energy has once again become a priority. This renewed interest in energy production is driven by a strong requirement for strategic independence.

Major political and economic initiatives in the United States and China have led to substantial investments and the mobilisation of significant resources for the development of current uranium-cycle-based technologies, such as Small Modular Reactors (SMRs), fuels, fast neutron reactors, and, more recently, future applications of thorium technologies.

The use of thorium for energy production, as well as its applications in nuclear waste transmutation via Accelerator-Driven Systems (ADS), is progressing steadily—particularly in China[2], which has a clear lead in terms of timelines, and in India[3]. Surprisingly, despite its advantages over the conventional uranium/plutonium approach, thorium still does not feature among the priorities of European industrial strategies.

In Europe, thorium and ADS are still perceived as competitors to conventional nuclear energy, possibly as a future step—but a very distant one—emerging well after the current wave of investments in reactors that "we know already how to be built". This wave is expected to lead to the commissioning, in the 2040s or even later, of conventional reactors without fundamentally resolving the nuclear waste issue.

It appears that the reduction of nuclear waste is no longer a priority today, even though the lack of a solution for its management was the main reason for the rejection of an energy source that is nevertheless indispensable to humanity. It is therefore our duty, as responsible scientists and concerned citizens, to promote renewed efforts in research and education in the specific field of thorium, taking advantage of the renewed interest in conventional nuclear

[1] European Organization for Nuclear Research, Geneva, Switzerland – www.cern.ch

[2] In 2023, China successfully commissioned its first molten salt reactor using thorium (MSR-LF1).

[3] India, which has limited uranium resources but one third of the world's thorium reserves, has declared thorium a national strategic priority.

energy. History shows that research, whatever its field, generates innovation, often well beyond its original objectives.

Today, China and the United States hold leading positions in research and development on new nuclear reactors. While Europe retains strengths in fundamental research, it is lagging behind in the deployment of future energy technologies, making a paradigm shift imperative.

Our message is a call to avoid relegating once again missed opportunities to the archives, through the following actions:

1. Create a panel of scientists, policymakers and industrial stakeholders to envision the nuclear industry of the future—safe, efficient, and featuring sustainable management of nuclear waste;
2. Identify technical gaps in order to make thorium technologies operational;
3. Initiate and lead thorium-focused curricula in universities and engineering schools;
4. Establish a monitoring and technological initiative body to track global developments;
5. Identify and promote stakeholders in future industrial applications of thorium technologies;
6. Consider European collaboration modelled on CERN.

We are convinced that such initiatives, driven by enlightened political decision-makers, would play a decisive role in the deployment of this new source of nuclear energy: an energy that is safe, free from risks of military proliferation, and environmentally responsible thanks to sustainable nuclear waste management. This is precisely what future thorium technologies promise.

On behalf of iThEC,

The President, Michele Battistin

Geneva, 24 April 2026

iThEC organised in Geneva on 17 September 2025 a public conference by Prof. Brit Salbu of NMBU (Norwegian University of Life Sciences), entitled **“Nuclear energy: should thorium be part of the equation?”**, available on the iThEC website.

iThEC also organised an international conference in Geneva in 2013, bringing together 200 experts from around the world on energy production and nuclear waste transmutation technologies based on the thorium cycle:

https://indico.cern.ch/event/222140/