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International Best Practices and Lessons Learned on the Public Engagement of the Back End of Fuel-Cycle

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HoNEST: Understanding the interactions between society and nuclear energy¹

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Dear colleagues, I want to express my gratitude for the opportunity to present our project, the History of Nuclear Energy and Society (or HoNESt for short) and some of the results and findings.

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[In this short presentation I will first explain the project and its aims, before outlining some of our major findings about the way in which nuclear energy and society have interacted across Europe since 1945, and the lessons which we can draw from past experience to establish a better way to move forward.](#) Of course my colleagues, Ms. Dr. Rubio and Dr. Espluga will present whit more deep some aspects of the project.

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¹ A version of this text was presented at the World Nuclear Association Symposium by Gene Rowe, Stuart Butler, Jan-Henrik Meyer, and Albert Presas i Puig, 15-17 September London, UK.

HoNESt is funded by the Euratom Research and training programme, and seeks to:

understand the development of nuclear energy and its relations with society in Europe from 1945 to the present,

and

- by learning lessons from the past – help to improve communication and interaction between civil society and the nuclear industry (and vice versa).

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HoNESt began in September 2015 and will end in February 2019. It is a large three-years project covering nuclear-society relations in 20 countries across Europe – East and West, North and South - and the USA. Historians and social scientists are working closely together to develop a common approach to understand how nuclear energy and society have interacted over time.

In a first steep HoNESt's historians have analysed the historical / empirical facts that define these relations in their national and transnational contexts.

Working across Europe, and in a second phase on the base of the historical results, HoNESt's social scientists are trying to understand the mechanisms through which nuclear energy and society perceive and interact with each other, and will 'back-cast ideal futures' in order to propose the establishment of a new relationship to break down the polarisation between the nuclear industry and certain sections of society.

For this purpose, we are holding many workshops to discuss our findings and engage with stakeholders from industry, associations, civil society and policy makers in the different regions in Europe, starting in September 2017 in Barcelona; then follow meetings in London, Munich and next week, we have a meeting with representatives of the regulatory bodies of different countries again in Barcelona.

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Across Europe, citizens have vastly differing opinions about the safety, reliability, and cost of nuclear power. In some nations, such as the UK and France, nuclear power is a relatively uncontroversial part of the electricity supply. By contrast in other countries, such as Austria or Denmark, since the 1980s, the rejection of nuclear power has almost become part of national identity. In yet another set of countries, such as Germany, Spain or Sweden, but also in Italy nuclear power has had a complex history of political controversies leading to moratoria on the building of new nuclear plants.

[Here we can see the kind of diversity and changing opinion that we have attempted to track. This data taken from Eurobarometer surveys shows in darker orange the proportion of people broadly in favour of nuclear power in just nine nations in 1984, and 1997.](#)

[Slide 6] & [Slide 7] [Shows change between 84 and 97 respectively]

Looking into the history of how nuclear energy and society have interacted since 1945 not only highlights the unique and singular histories of each country (and even in some countries with their several unique and particular stories), but also to identify trends in the way in which nuclear power and society have interacted across the twenty countries we are examining.

Across these countries a number of events, and mechanisms of interaction have stood out because they highlight unique or common effects on nuclear-societal relations.

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Eisenhower's Atoms for Peace initiative begun in 1953, and leading to a first international conference in Geneva in 1955 has often been seen as the start of many European nuclear programmes. What is often represented as a top-down American attempt to control nuclear energy on the European continent has merely shaped rather than directed many European energy programmes. Countries such as Sweden, Finland, Austria, Spain and Italy had begun their own research well before Eisenhower's speech, and Atoms for Peace represented a challenge to an established system and not the instigating spark.

For many Europeans, the touring exhibition which accompanied the first Atoms for Peace conference in 1955, was the first introduction to the opportunities of the 'Our friend the Atom' as the famous Disney movie put it. [Although](#) the touring exhibition represented the first contact point for many Europeans with the peaceful atom, it was not necessarily the most successful. Atoms for Peace kicked off subsequent national efforts: for example, the year-long national exhibition at Schiphol Airport in 1957 was far more successful than the Atoms for Peace exhibition had been, and it was visited by nearly a fifth of the Dutch population. A similar story can be told in the UK. Between 1947 & 1948 the British Atomic Scientists' Association touring exhibition, known as "The Atom Train" visited 25 major cities across Britain and Northern Ireland to much fanfare and press attention.

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Up until the 1970s, such top-down communication efforts were clearly successful in ensuring that nuclear power remained of limited concern to the average European. However, across all of our research the early and mid-1970s have emerged as key turning point for the nuclear industry. That the start of anti-nuclear protest predated Three Mile Island by almost a decade, with large-scale protests in France, West Germany and Spain in the early 1970s e.g., is widely forgotten. [There are a variety of reasons for this rising culture of scepticism. Amongst these,](#) protest and critique started in the aftermath of the post-1968 political mobilization. This context of criticism indicates that frequently the discussion about nuclear energy appeared biased by other type of discussions.

Growing environmentalism raised new questions concerning environmental impacts and risks. Whilst it is a seductive short-hand to track the growth of anti-nuclear protest to reactor accidents at Three Mile Island in March 1979 or Chernobyl in April 1986, and suggest that a safe, well-regarded nuclear industry [was](#) simply unlucky, it is clear that key anti-nuclear movements were being formed and that societal perceptions and discourses were changing [early in the 1970s and that the accidents simply reinforced growing scepticism and mistrust.](#)

There are broad differences and similarities across Europe for shifting public perceptions in this period ranging from the economic, to the environmental, to the [cultural, social,](#) political and historical. Growing anti-Americanism, borne out of opposition to Vietnam, a growing counter-cultural movement, growing youth protest movements, [and in some nations growing tension between rural and urban cultures were important in increasing](#) concerns about nuclear power in this period.

This critique of nuclear power [was](#) not only driven by emotions, as has often been argued. Indeed, anti-nuclear activists gathered ample expertise. Technical and scientific knowledge also travelled across borders, mediated via transnational networks.

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Of course, these growing concerns were not felt equally across the continent. The way in which such nuclear and non-nuclear issues became linked was vital in driving the growth of public concern and shifting perceptions about nuclear energy across Europe, and the unique histories of each country played a direct part about the way in which this opposition manifested itself. What mattered in particular, was trust in government and public institutions, trust in the state.

In Sweden, where trust in the government is relatively high, and there is a high degree of democratic participation at local and national levels, concerns about the development of a large programme of nuclear power stations prompted a national referendum on the use of nuclear power stations [in 1980](#).

In the UK, where [trust in key institutions was high](#), critical attention and public protest had historically been focused on the country's development of nuclear weapons rather than nuclear power, a rapidly growing environmental movement found the dumping of nuclear waste at sea concerning, and prevented test-drillings for a waste repository across the country. By contrast, nuclear power stations did not raise as much critical public attention. Recent efforts to move towards nuclear new-built have not been very controversial, and the government's argument that they were necessary to combat climate change, was hardly challenged.

In Spain and West Germany, where trust in government was low due to past or contemporary dictatorships, there was much greater concern about the intentions of the nuclear industry.

Throughout the 1970s and 1980s the nuclear industry attempted to maintain similar top-down communication models, pointing to the environmental benefits of a technology cleaner than coal, the economic

benefits of job creation in a large-scale industry, and faith in the ability of engineers to 'solve the waste problem' or at least mitigate the risks. Given the way in which nuclear concerns were linked to broader activism about the role of the State, or potential environmental damage, such communication effectively reduced trust and raised concerns about an industry which it seemed did not want to listen to or understand society's concerns.

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The adoption of more deliberative and dialogic engagement practices from the 1980s onwards has significantly lessened critical attention to nuclear power in many countries. This is particularly true in countries where trust in key institutions remained high. However, in countries such as Spain where trust in state institutions and large private companies was highly limited due to the experience of previous dictatorship, even these more deliberative communication methods have been met with scepticism and mistrust. One of the issues that most seem to encourage mistrust in state institutions is the question of the "Rotatings doors."

Meanwhile, in others, there are occasions where nuclear-society relations are significantly shaped by happenstance such as Italy, where the timing of national referenda on nuclear power has coincided with accidents at Chernobyl and Fukushima.

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What can be learnt from such a diverse national stories? What can we learn from the reflexion on the historical experience? what can we learn from the HoNESt? Generally speaking, discussion on nuclear energy was never an isolated discussion of other problems, of other discussions. The inability of the main actors to understand the complexity of the discussion

has marked the debate since its inception. This incapacity, as it happens, simplifies and, as is often the case, simplification leads to radicalization. And this is the most effective way to reach an dead end, to reach an cul-de-sac. Certainly it is clear that **trust** between the nuclear industry and society is not easily won. Instead, it is something which must be earned through reliability, openness and honesty. It also requires the recognition of the other and its capacity to understand. Rather than dismissing any critique of nuclear as solely driven by emotions, critics' expertise and technical knowledge should be recognized. Mutual recognition – on both sides - is a fundamental basis for engaging in a substantive debate. The impact of previous experience leads to path dependencies. Lost trust is hard to rebuild. But it is worth trying. The work of HoNESt wan to help to track and identify successful modes and methods of dialogue and back-cast ideal futures to postulate the foundation of a new communicative relationship between nuclear energy and society.