CANHC
Canadian Association of Nuclear Host Communities

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GROUP OF EUROPEAN MUNICIPALITIES WITH NUCLEAR FACILITIES

Report for the Canadian Association of Nuclear Host Communities (CANHC)

Developing host community agreements for SMRs

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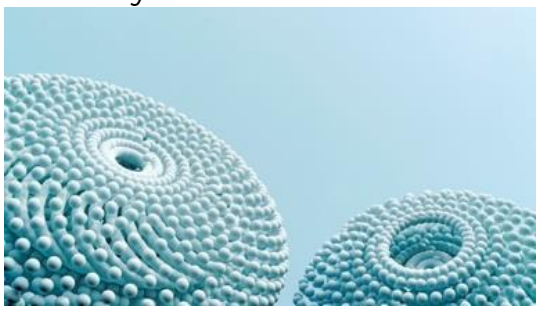

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Acronyms

AMAC	Spanish Association of Municipalities in Nuclear Areas
ANDRA	National Agency for Radioactive Waste Management (France)
ARCICEN	Association of Communes hosting Nuclear Power Plants (France)
CANHC	Canadian Association of Nuclear Host Communities
CEA	Atomic Energy Centre (France)
Cigéo	Industrial Centre for Geological Disposal (Centre Industriel de Stockage Géologique), France
CSN	Spanish Safety Authority
EDF	Electricité de France
EIA	Environmental Impact Assessment
EPR	European Pressurized water Reactor
FSC	Forum on Stakeholder Confidence
GDF	Geological Disposal Facility
GIP	Groupement d'intérêt public (Public Interest Group) in France
GMF	Group of European Municipalities with Nuclear Facilities
IAEA	International Atomic Energy Agency
IFE	Institute for Energy Technology (Norway)
JAVYS	Slovak Nuclear and Decommissioning company
KHNP	Korea Hydro & Nuclear Power
KSO	Association of municipalities with nuclear facilities in Sweden
LLWR	Low Level Waste Repository
LILW	Low and Intermediate Level Waste

NDA	Nuclear Decommissioning Authority (United Kingdom)
NEA	Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (OECD)
NND	Norwegian Nuclear Decommissioning
NPP	Nuclear Power Plant
NWS	Nuclear Waste Services
PoCES	Underground Environment Competence Centre
PPA	Planning Performance Agreement
PURAM	Public Utility for Radioactive Waste Management (Hungary)
SE RAW	State Enterprise Radioactive Waste (Bulgaria)
SMEs	Small and Medium-sized Enterprises
SMRs	Small Modular Reactors
UKAEA	United Kindgom Atomic Energy Authority
UOHS	Office for the Protection of Competition (Czechia)
URL	Underground Research Laboratory

Executive Summary

This report, commissioned by the Canadian Association of Nuclear Host Communities (CANHC), provides an in-depth exploration of host community agreements for nuclear facilities. Drawing from a diverse range of European experiences, the report offers a conceptual framework, case studies and practical guidelines to help host communities and developers design equitable, sustainable and effective host community agreements. Although the intention was to investigate host agreements related to Small Modular Reactors (SMRs), there are so far no formal community agreements for SMRs in Europe. Ongoing projects like those in Canada, Estonia, Romania and Poland highlight the growing need for structured agreements to address community engagement and benefit-sharing.

European nuclear communities employ diverse models for community agreements related to nuclear power plants or repository facilities, ranging from legally mandated compensation frameworks to locally negotiated agreements. These models balance financial incentives, social benefits, and community empowerment measures and provide a source of inspiration for community agreements related to SMRs. Core elements of community agreements encompass financial contributions (e.g. payments, tax revenues, grants), socio-economic benefits (e.g. employment, training, and infrastructure development), community empowerment measures (e.g. participation in decision-making, local monitoring, and capacity building). The countries analysed in this report include: Belgium, Bulgaria, Czech Republic, Finland, France, Hungary, Netherlands, Norway, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

The report proposes a set of core elements and guidelines for SMR community agreements, which include:

- Knowledge Building: Developers should understand the socio-economic, cultural and historical context of host communities.
- Capacity Development: Communities must be equipped with resources and skills to negotiate effectively.

- Early and Inclusive Engagement: Early, ongoing and meaningful engagement with all community stakeholders is crucial.
- Comprehensive Agreement Design: Host community agreements should include clear objectives, implementation plans, governance structures and monitoring mechanisms.
- Sustainability Focus: Agreements should promote long-term community benefits that extend beyond the operational lifespan of SMRs.

By leveraging lessons from European nuclear agreements, this report underscores the importance of tailoring host community agreements to each host community's unique needs and aspirations, particularly as SMRs offer opportunities for innovative energy solutions requiring careful alignment with local priorities.

1. Introduction and aims

This paper offers an overview of community agreements in the nuclear field in fourteen European countries as a baseline to develop guidelines for host community agreements for SMRs. This study responds to the interest of CANHC regarding community agreements for SMRs. So far, no SMRs have been commissioned in Europe yet. However, different SMR developers, among others, Rolls Roys or Westinghouse in the United Kingdom (UK), Fermi Energia in Estonia[1] or Orlen Synthos Green Energy in Poland are approaching potential sites to host SMRs. In Romania, NuScale has signed a Memorandum of Understanding with Nuclearelectrica and other corporations to collaborate in the deployment of the Doicești SMR in the county of Dâmbovița, in a disused thermal plant site.

Agreements with hosting communities for SMRs are not available as of now in European countries. The European project TANDEM[2], which aims to develop methodologies and tools to facilitate the safe and efficient integration of SMRs into smart low-carbon hybrid energy systems, has pointed out at the need of negotiating host agreements with host communities. The TANDEM researchers define three phases of social engagement, as envisaged in formal processes such as Environmental Impact Assessment or zoning processes: i) Phase I: planning and capacity building to build a relationship, learn from each other and develop a common understanding; ii) Phase II: Site screening and asssessment which would be a community led process to develop a preliminary and detailed assessment with the community and iii) Phase III: negotiation and implementation comprising negotiating agreements with the host communities (Airola, 2024).

Existing agreements between host communities of nuclear facilities and the nuclear industry are available across European countries. The projects considered in this study include nuclear power plants (NPPs), deep disposal facilities of high

[1] In Estonia, Fermi Energia is currently working with municipalities on spatial planning and decision-making for SMR projects. The company has signed agreements with two municipalities in order to be included in the site selection process.
[2] Small Modular Reactor for a European Safe and Decarbonised Energy Mix. Further information: https://tandemproject.eu/

level waste and/or spent fuel, disposal of low and intermediate level waste, storage facilities for diverse categories of waste, nuclear research reactors or underground research laboratories (URL). The projects under consideration are in various stages of implementation: operational, under construction or planned.

The aim of this study is to provide an overview of current agreements between municipalities hosting nuclear facilities and the nuclear industry and/or governmental bodies or safety authorities and to draw up guidelines or basic principles to be considered in any agreement put forward to the potential candidate municipality to host an SMR, which would need to be adapted to each specific case. The countries studied include: Belgium, Bulgaria, Czech Republic, Finland, France, Hungary, Netherlands, Norway, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom (see Figure 1). This report does not intend to evaluate the impact of these agreements to the individuals, community groups or local authorities' policies or activities. Such an evaluation could be explored in future studies.

Figure 1. Map of the countries selected for this study

The next section briefly describes the methodology used for this study. Section 3 presents the conceptual framework used for this report whilst Section 4 details the community agreements in fourteen European countries which are members of the Group of European Municipalities with Nuclear Facilities (GMF). Finally, Section 5 proposes a set of guidelines which could serve as a reference to develop host community agreements for SMRs.

2. Methodology

This study follows a scoping review approach, combining multiple methods to explore the range of host community agreements in the nuclear field across nuclear communities. The review aims to map existing knowledge, identify key themes and highlight gaps in available data. The study is based on:

- **Document and literature review**: Review of reports, articles and documents addressing societal aspects or the socio-economic impact of nuclear activities across nuclear communities (e.g. radioactive waste management, new build, etc). This includes international documents from the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA), findings from European research projects, academic papers published in journals, relevant legislation and government policy and strategy at national level and documents provided by GMF members;

- **Stakeholder contributions**: Qualitative and quantitative data on existing agreements with the government and/or industry provided by GMF members across fourteen countries. Folllow-up emails were sent to all members requesting information and /or validating the information included in this report.

- **Interviews** with mayors of communities with nuclear facilities to understand and assess the key aspects of host community agreements.

This report does not contain any comparison between financial benefits, as these are strongly context related. In addition, benefits which are not financial are not easily quantifiable in monetary terms but may form a substantial part of the community socio-economic development.

3. Conceptual framework

The term “host community” may imply that the community is a homogenous group and not the wide range of people with different interests, attitudes and values. This study does not try to define the term “host community” or establish criteria for its boundaries but it will draw attention to these terms to highlight that caution should be taken when using them.

The term “community agreements” refers to agreements between the various stakeholders involved in a project, in particular between the developer or promoter and the host community, which can provide a range of benefits, including financial incentives, social benefits in kind and community empowerment measures. This term acknowledges the fact that the community’s participation in the project is recognised and perceived as being “in the national interest” rather than providing a compensation for the projected impacts. Other terminology used to refer to community agreements could be: voluntary agreements; partnership agreements; participation agreements; impact and benefit agreements; benefits packages or benefits-sharing agreements; indigenous land-use agreements; landowner agreements; consensus agreements; shared responsibility agreements; empowerment agreements; community joint ventures; local level agreements; cooperation agreements or community contracts.

Kojo et al. (2013) define two types of approaches regarding the allocation of incentives and benefits: a) “**legally imposed approach**” where the type of incentives and benefits, their amount and any associated preconditions are determined beforehand in legislation or agreed processes and b) “**locally negotiated approach**”, where the type of incentives and benefits, their amount and any associated preconditions are negotiated between the key players at the local level without a legislative procedure. They are then often subject to formal agreement between the negotiating parties.

The types of benefits and incentives might cover a combination of the following: revenues or financial incentives, training and employment opportunities, local business contracts, local infrastructure development, adverse impact mitigation measures, decision-making authority, implementation measures, support for the supply chain and impact monitoring programmes (Bergmans, 2010; Kojo et al., 2013; Zdanowski, 2022). Overall, the types of incentives could be classified as (IAEA, 2022):

- **Financial incentives**: an annual payment or lump sum or both, share in local tax revenues, discounts in terms of reduced utility fees, equity shareholding or profit sharing with the local community, trust funds for future generations; etc;

- **Social benefits in kind**, where the developer may provide for a community facility, employment opportunities, skills development or local (environmental) improvements, infrastructure or transport improvements, affordable housing, training schemes, sports facilities, village halls, property value protection, etc;

- **Community empowerment measures** where the community has some degree of control over the siting, development and even operation of the facility. These measures could include, for instance, participation in decision making (e.g. veto power), ongoing monitoring, local capacity building, review groups or local monitoring groups.

Given the variability and lack of comparability in figures provided by these community agreements, it is more appropriate to provide a qualitative description rather than a quantitative comparison.

The Forum on Stakeholder Confidence (FSC) of the Nuclear Energy Agency has explored the concept of "**added value**" since 2007 in relation to radioactive waste management facilities and processes. In the past, added value referred mainly to fees and socio-economic development packages (i.e. employment, infrastructure development) intended to compensate for real and perceived impacts. Kojo and Richardson (2012) proposed a working definition of 'added value approach' as "an umbrella covering different elements of institutional mitigation, compensation and incentives in the site selection process" or "a coherent set of practical measures that are applied to assist the siting process". In this working definition, the authors adopted a broad viewpoint, including incentives and compensation but also institutional mitigation to refer to empowerment of local citizenry in the facility siting decision.

According to NEA (2020), a few countries use the term "added value" apart from Sweden and Belgium. However, the contribution of the facility to the well-being of the potentially hosting community and the surrounding area, beyond the economic part and without compromising safety, helps to build a long-term

sustainable relationship between the community and the facility. Thus, the concept has evolved beyond this transactional and monetary approach and refers now to the "long-term relationship building, the cultural and amenity value of facilities, and other intangible aspects in both the short and long term" (NEA, 2022) once safety considerations have been addressed. The NEA (2015) report on "Fostering a Durable Relationship between a Waste Management Facility and its Host Community: Adding Value through Design and Concept" already presented different features to help maximise the added value brought to the community by a radioactive waste management facility in the short and long-term. Through an early and meaningful dialogue with the community, the added value opportunities can be defined to align with the community expectations and aspirations and to contribute to community life in the future.

4. Community agreements in European countries

GMF consists of sixteen member countries, ranging from individual municipalities with nuclear facilities to associations of municipalities hosting or interested to host nuclear facilities. This study focuses on fourteen countries: Belgium, Bulgaria, Czech Republic, Finland, France, Hungary, Netherlands, Norway, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom (Figure 1 above). In each of the countries studied, different community agreements have been put in place or are being considered, in related to a range of nuclear facilities. In the following sections, a general overview is provided of the variety of community agreements identified with the NPP and/or the radioactive waste management organisation or other relevant actors.

Belgium

The radioactive waste management organisation in Belgium, ONDRAF/NIRAS, established local partnerships with the assistance of the University of Antwerp and the Foundation Universtaire Luxembourgoise, to bring the decision making process regarding the short-lived low and intermediate level waste (LILW) repository closer to the communities. During the site selection process at the end of the 1990s, the objectives of the local partnerships were to develop an integrated

disposal combining both technical (concepts, safety, environmental and health requirements) and social implications (socio-economic added value and ecological preconditions). In 2006, the federal government chose Dessel municipality as the site for the surface disposal facility.

Out of the four local partnerships initially formed with volunteer communities, two of them remain active. The local partnerships in Dessel and in the neighbouring municipality, Mol, are currently funded by ONDRAF/NIRAS and they both independently manage their budgets. The partnerships receive an annual statutory allocation of €250,000, primarily used to cover staff salaries, communication efforts, operational expenses, business trips and similar costs. In addition, the partnerships can commission specific studies or engage experts when additional research in certain areas is deemed necessary. At the end of each fiscal year, the partnerships' operating costs are reconciled, and any unspent funds are returned to ONDRAF/NIRAS as per the agreed terms.

The socio-economic added value of the LILW repository extends beyond its primary function, encompassing initiatives to retain nuclear know-how, leverage spatial opportunities and support community health monitoring. A significant component of the partnerships is the establishment of a local fund to finance socio-economic and cultural projects. This local Fund is linked to granting the construction and operating authorisations and was officially founded in 2016. Its resources come from the medium term fund, established by a legal instrument through taxes levied on the waste producers. The local fund is designed to operate for the next 300 years, with an initial transfer of €90 - 110 million from the medium term fund. These funds will be invested, allowing future generations to use the generated interest to support community projects, cultural activities and the preservation of the memory of the repository (IAEA, 2022).

A key achievement of the local partnerships has been the creation of the communication and community centre Tabloo in Dessel which serves as a central hub for information on radioactive waste management while offering a welcoming space for the local community. The Tabloo facilities include spaces for social gatherings, concerts, a park with outdoor play areas and a promenade to the future repository.

The name 'Tabloo' originates from the Esperanto word for table and refers to the 15 metre-high concrete table structure of the building. This table represents ONDRAF/NIRAS' commitment to ongoing dialogue on radioactive waste management. Over time, this landmark is expected to remain a significant feature in the landscape, serving as a living reminder of the nearby near-surface repository. The architectural design underscores sustainability and adaptability. The concrete table is structurally independent from the wooden substructure, which is intentionally temporary. This modular approach allows the spaces beneath the table to evolve and accommodate future community needs.

Figure 2: Tabloo in Dessel

Source: Bovenhouw Architectuur

In addition to Tabloo, in 2016, ONDRAF/NIRAS and the partnerships of STORA in Dessel municipality and MONA in Mol municipality together with a local university college, established LIBRA, the Learning and Info-Point Management of Radioactive Waste (LIBRA). This initiative seeks the involvement of the younger generation in the preservation of knowledge in the region. The students undertake project work on behalf of ONDRAF/NIRAS under the supervision of the teachers of the college. LIBRA also organises seminars, discussion groups and sessions where experts anser questions.

Another project undertaken with ONDRAF/NIRAS and the partnerships as one of the conditions for the surface storage of LILW is the so-called 3xG study in Dessel, Mol and Retie. This scientific research project aims at mapping the exposure to environmental pollutants in order to monitor the health of the local population in

this region. The 3xG researchers collect data on harmful substances in the bodies, the living environment and the lifestyle. This data is collected from approximately 300 children, starting from pregnancy and continuing until they are 18 years old. Participants act as a kind of "barometer" for harmful substances in the environment. Researchers map exposure to these substances and try to better understand the effects of these substances on the health and the role of the lifestyle. The 3xG study makes Dessel, Mol and Retie one of the most closely monitored regions in Flanders.

Bulgaria

Kozloduy municipality has an agreement with State Enterprise Radioactive Waste (SE RAW), based on current legislation, by which up to 2% of the enterprise's annual budget has to be invested in projects supporting the local community. The total annual sum is approximately €150,000. These funds have contributed to developments such as an 11.2 km ring road and a sports and recreation center.

Kozloduy NPP also cooperates with the municipality after they signed an agreement in 2016 through which €100,000 are invested annually in support of projects of local importance (e.g. playgrounds, hospital, renovation of public streets, etc).

Czech Republic

The Czech Republic relies on six nuclear reactors to generate over one-third of its electricity and plans to transition to a mix of nuclear power and renewable resources. This shift follows the country's decision to phase out coal for energy generation by 2033 to reduce carbon emissions. The country operates two nuclear sites managed by ČEZ: Dukovany with four units and Temelín with two units. The Czech government selected last July 2024 Korea Hydro & Nuclear Power (KHNP) as the preferred bidder for the APR1000 project to build at least two additional nuclear reactors. However, on 30 October 2024 the Czech anti-monopoly office (Office for the Protection of Competition, UOHS) put a temporary block on the conclusion of a contract with KHNP for the construction of a new nuclear power unit following appeals from Westinghouse and EDF. As of February, 17, 2025, the intellectual property dispute between KHNP and

Westinghouse has been resolved and the Korean consortium and Czech authorities are expected to sign the official contract in March 2025.

ČEZ has also signed a strategic partnership agreement with Britain's Rolls-Royce SMR to develop and deploy SMRs. These SMRs are expected to be operational by the early 2030s at the Temelín NPP. In addition, ČEZ has initiated an Environmental Impact Assessment (EIA) for a new SMR at Temelín for electricity and heat production. The current scoping phase of the EIA process involves gathering initial feedback on the proposal from municipalities, the region, the public, and other relevant governmental and non-governmental organizations. The primary goal is to refine the information that ČEZ must address during the subsequent EIA documentation phase. Additional locations such as Tušimice are being considered for SMR deployment, potentially replacing old thermal power plants.

Unlike Slovakia, the Czech Republic does not impose taxes on nuclear facilities, spent fuel storage or radioactive waste repositories. However, property taxes serve as a key revenue source for municipalities hosting nuclear facilities. At Dukovany, the property tax is distributed between the municipalities of Dukovany and Rouchovany, as they fall within the New Nuclear Source Elektrárna Dukovany NPP area. For Dukovany municipality, this tax accounts for approximately one third of its annual budget, with ČEZ being the largest taxpayer. In addition to property taxes, municipalities benefit from financial support through sponsorship agreements with ČEZ, as well as grants and projects funded by the ČEZ Foundation. These contributions provide additional resources for neighboring communities.

Finland

The world’s first deep geological repository is being built on Olkiluoto in the municipality of Eurajoki. This rural village of over 9,000 inhabitants, already hosts three NPPs, providing about one third of the country’s electricity, an interim storage for spent nuclear fuel, a repository for low and intermediate level waste.

The deep geological repository for spent fuel is expected to begin operations in 2025 or 2026.

In Finland, the EIA and the Nuclear Energy Act regulate nuclear investments. In particular, the Nuclear Energy Act includes the right of veto of the local council when taking decisions in principle. Thus, the siting process of a nuclear facility requires a favourable statement by the local council before the process can proceed.

The nuclear power company TVO has been the biggest employer in the municipality. It has created around a thousand direct jobs as well as indirect jobs (i.e. local suppliers and service companies). According to the Turku School of Economics, at the start of the construction of the third NPP Olkiluoto 3, the estimated direct and indirect employment impact was about 6,000 person years in Satakunta region. As the construction took longer than assumed, the final figure could be more than 10,000 person years. Municipal tax revenue brought Rauma municipality almost €100 million and Pori municipality more than €30 million in extra income (TVO, 2022).

The property tax revenue on nuclear facilities is a significant economic incentive in Finland. In 1999, the municipality argued that the real estate tax rate should be considerably higher for a repository than for a NPP and that the rate should be specified in the real estate tax legislation (Kojo, 2009, 82). According to Kari et al. (2021) about 90% of the Eurajoki's real estate tax revenue in 2010 came from the nuclear utility TVO and from the radioactive waste management agency Posiva. This represented approximately a third of its total annual tax revenue. In 2022, TVO and Posiva provided a total of €20 million in property taxes from a total of €57 million in tax revenues for Eurajoki municipality (Amouret et al., 2024). The steady income from the nuclear industry allows to plan future investments to enhance the well-being of the inhabitants, such as renovating schools, a new library, a €8 milion sports facility, improving roads and health care, as highlighted by the mayor Vesa Lakaniemi (Gaffney, 2024). The employees of the nuclear industry pay income taxes to the municipality. TVO and Posiva also sponsor local organisations.

In the context of this report, it is worth highlighting the negotiations between Posiva and the municipality of Eurajoki known as the "Vuojoki agreement". Posiva

and the municipality negotiated in 1999 on mutual economic benefits of choosing Olkiluoto as the site for final disposal of nuclear spent fuel. Eurajoki agreed to lease a real estate, the Vuojoki Mansion, to Posiva for use as its headquarters and Posiva agreed to finance the construction of a new senior centre in Eurajoki. Posiva gave Eurajoki a loan of over €7 milion and helped it to establish a business development fund and build an ice stadium. The municipality paid the loan back with the rent income (Kojo, 2009). As of 2016, Posiva's headquarters are no longer located in Vuojoki Mansion, and the lease agreement concluded in 2022.

France

In France, EDF is the sole operator and only shareholder of NPPs. A tax is levied on companies as part of the territorial economic contribution, which essentially comprises:

- the contribution on the added value of enterprises (*Contribution sur la Valeur Ajoutée des Entreprises*) and the contribution on business property (*contribution foncière des entreprises*) for groups of communes
- the property tax on built and non-built land (*Taxe foncière sur le Bâti et le non Bâti*), collected by individual communes.

The total amount received by local authorities is capped to contribute to national equalization funds, which are redistributed among all French local authorities according to criteria laid down in the Finance Acts. At a GMF meeting co-organised with the French association of communes hosting NPP (ARCICEN), mayors from municipalities expected to host new European Pressurized water Reactors (EPR2) reported that an interministerial task force had been appointed to design an appropriate tax system. This system is being developed under the principle that "it is essential to share tax resources fairly between local authorities". As a result, a specific tax framework may be introduced for the new EPR2 reactors.

Local authorities can negotiate with the operator the provision of land required for these facilities. Additionally, regional and departmental authorities can negotiate with EDF and the State on the financing of the infrastructure such as roads, public housing and public services.

Compensations for radioactive waste management are also managed at national level. The future geological repository and current URL situated in Bure, straddling the Meuse and Haute-Marne departments in Northeast France, covers 33 small communes. The legislation in France foresees the creation of public legal entities named Public Interest Group (GIP in French) to foster economic support initiatives and help the integration of the URL and the Industrial Centre for Geological Disposal (Cigéo). In this respect, GIPs have been set up for the Cigéo project in both the Meuse and Haute-Marne districts, covering more than 300 communities near the Bure URL. Each of these departments receives approximately €30 million per year through legally mandated schemes funded by charges levied on waste producers. At least 50% of these funds must be allocated to regional projects.

Lehtonen and Kojo (2019) argue that critics of GIPs, primarily local NGOs, claim that they are inefficient, spend public funds on luxury projects, foster dependency on state funding and distort competition by favouring local entrepreneurs over those from other regions. Additionally, they have failed to deliver the promised territorial development. On the contrary, supporters of GIPs consider them as fair and just compensation preparing the region for a nationally significant project. However, allegations of bribery are widespread.

The Community of municipalities Portes de Meuse, comprising 51 small municipalities with less than 500 inhabitants each and a total pouplation of 16,500, is involved in the Andra project Cigéo through a dedicated development project. A contract was signed by a high-level committee between the State and the operators in 2019, but this contract did not assign specific financial resources. The different projects involve a diversity of fields, which are summarised below:

- Training: PoCES – Underground Environment Competence Centre offers companies operating in underground environments, adapted and tailor-made training in the area of construction of underground structures (civil engineering, tunnels), exploitation of underground quarries, exploration and mining, extraction of construction materials. PoCES is also a centre for exchange, monitoring and development of knowledge and practical know-how in the underground environment.

- MFR – training centre to help professional projects for families and in the context of rural areas.

- Health e-meuse: health experimentation platform based on digital and organisational innovation in three areas (Meuse, Meurthe-et-Moselle and Haute-Marne).

- Economic: Parc'Innov (70 hectares) – new model of industrial ecology with le Bassin de Joinville-en-Champagne, launched as a result of a partnership with the Atomic Energy Centre CEA. The idea is to host innovative and complementary industries which create synergies among them (e.g. the waste generated in one facility can be used as a resource in another nearby facility).

In addition to the projects mentioned above, since 2006, the waste producers (EDF, Orano and CEA) have undertaken different actions to respond to the future industrial needs. They have financed nuclear related high school curricula, trained local businesses, provided investment loans, supported energy efficiency and renewable energy investments. From 2006 to 2023, the three companies (EDF, Orano and CEA, 2023) claim to have:

- created 2,500 jobs;

- supported 150 enterprises;

- invested directly €180 million;

- made orders to local companies for a value of €500 million.

Hungary

Hungary has four public oversight and information associations near the following facilities:

- existing near surface repository for medical and research waste at Püspökszilágy operating since 1976 (ITET);

- repository for low and intermediate level waste generated by the nuclear power power plant production in Bátaapáti (TETT);

- interim storage facility for spent fuel at Paks NPP (TEIT);
- candidate siting area for a high-level waste repository at Boda (NyMTIT). As part of the preparatory activities for the deep geological repository, an URL will be established in this area.

These associations bring together members of the host community as well as neighbouring communities for discussions with implementers about issues affecting the local area. These associations have contracts with the Ministry of Energy and with the operators of the Paks NPP and the Public Utility for Radioactive Waste Management (PURAM). There are two types of contracts: support framework agreement and annual support agreement. The **support framework agreement** is an open ended contract which includes the tasks to be executed by the association and individual municipalities. It only contains certain conditions (e.g. communication channels to be used, communication activities to be organised, participation at international forums among others) and does not include financial matters. The **annual support agreement** is renewed every year and includes the amount of the financial support paid from the central nuclear to the financial fund. The amount is calculated according to a rigid algorithm laid down in legislation, which considers factors such as the distance from the reactor and the population size within the area. One of the main challenges is that the payments are only made after the approval of the national budget law. Roughly the four associations receive €3 million per year. Muncipalities can use the funding for the operation of the association and project developments. Finally, TEIT association has an independent contract with Paks NPP which is renewed every year and includes rights and obligations.

Netherlands

In the Netherlands, the municipality of Borsele (22,800 inhabitants), which hosts the only NPP in the country and a radioactive waste storage facility, does not receive direct funding from these facilities. However, both the owner of the Borssele NPP, EPZ and COVRA, the central organisation for radioactive waste, support Borsele community in different ways.

Borsele municipality, together with the other 12 municipalities and the Province of Zeeland, is a shareholder in the Borssele NPP. The municipality of Borsele

therefore receives a dividend, depending on the results that are achieved. For instance, in 2022 and 2023, the municipality received around €2 million each year and in 2024, the municipality received €5 million, but the years 2020 and 2021, no dividends were received. Negotiations are currently underway with the national government to establish new conditions if two additional nuclear reactors are built in Borsele.

The municipality of Borsele also receives revenues from local taxes of both EPZ and COVRA. These are similar to those levied on other buildings and businesses. These typically amount to a few hundred thousand euros annually.

Several social foundations and (sports) clubs in Borsele municipality are sponsored by EPZ. EPZ also participates in the Borsele Landscape Park Foundation. The aim of the foundation is to increase the attractiveness of Borsele as a pleasant place to live, work and relax. A regional climate fund, which helps to implement sustainable energy projects in the region, also receives a contribution. A local cycling race also bears the name of the company, the EPZ Omloop van Borsele. Over 550 cyclists from 20 different countries participate in this race annually.

COVRA supports a number of cultural institutions, including the museums of Zeeland. This is done through sponsorship and by providing storage space and emergency storage. Each year COVRA also gives financial support to several local activities in the municipality of Borsele, such as the Borsele Landscape Park Foundation, and a number of smaller initiatives in the region.

Norway

There are no nuclear reactors for generating electricity in Norway. However, since the 1950s Norway has operated four research reactors, one located in Halden (32,000 inhabitants) and three at Kjeller. In 2018/2019 the government decided to permanently shut down these reactors and established the Norwegian Nuclear Decommissioning (NND) to take over the ownership from the Institute for Energy Technology (IFE) which had previously managed these facilities. The NDD has also responsibility for managing the radioactive waste.

Halden municipality received a variable state grant related to the decommissioning, although the costs of decommissioning are fully covered by

the state. In 2023, the municipality received a grant of €85,000 and of €127,000 in 2024.

Halden municipality has an agreement with NDD through which they establish and operate a collaborative project. This agreement which has the aim to build knowledge and share information is based on volunteerism, openness and broad participation from the local community. NND covers the costs for resources, including competence building, but the content, scope and cost framework of the project must be agreed in advance. The specific points of the agreement include:

a) Cooperate to build knowledge, expertise and value creation in society on decommissioning; RWM, interim storage and disposal of nuclear waste.

b) Halden Municipality shall participate in NND's work to investigate to establish an interim storage, systems for RWM and disposal in Halden.

c) Halden Municipality will participate in NND's work in the implementation of a pilot project concerning the location of deep repositories and/or deep boreholes in Halden.

d) Collaborate on competence mapping and facilitation of skills development and education so that the local community can take part in decommissioning.

Halden municipality has also agreements with the Norwegian Nuclear Association to exchange and co-develop nuclear technology and technology with other sectors, such as oil and gas and with the Norwegian Nuclear Research centre. Halden has agreements with local research institutes under the so-called Halden Group which includes local institutes and business (IFE, Smart Inovation Norway) and ad hoc agreements for the development of specific events and clusters (e.g. DigiDECOM conference). As part of the Halden group, the municipality is funding around €60,000 to €100,000 for the collaboration between Norway, Poland and Ukraine in the field of emergency preparedness.

Halden is also chairing the newly formed Association of Nuclear Municipalities which consists of 60 municipalities whose aim is to collaborate to establish new nuclear facilities.

Slovenia

Slovenia has a shared NPP with Croatia since 1981 which is located in the municipality of Krško (6,852 inhabitants). The country is currently considering adding a second unit at the Krško NPP. A referendum on whether Slovenia should go ahead with the NPP was scheduled for November 24, 2024, but finally cancelled in the parliament. A blueprint of Krško 2 bill will be drawned up and the public will be included in the process.

A permanent repository for LLIW is planned at Vrbina, near the Krško plant. Site selection was undertaken over five years. Two governmental decrees[3] foresee provisions that the local community would be compensated up to €5 million per year. The compensation decree of 2003 was amended in 2008, 2015 and 2020. Taking into account the inflation rate in the years from 2015 to 2019, the amendment slightly increased the basis for calculating the compensation.

The Decree on the criteria for determination of the compensatory amount due to the limited land use of the environment in the area of a nuclear facility specified an exact amount of compensation for the resulting 'limited land use' that would be available to the LLW repository host community prior to identification of the final site. The operator pays a fee to the municipalities that have part of their territory in the area of planning inervention measures of a nuclear facility. This represented an incentive for local communities during field investigation, construction and operation of the LILW repository. It defined that the compensation €2.3 million in total per year should be paid to the local community during repository operation and 10% of the value during field investigations and construction (Zeleznik et al., 2005).

The current funds for the fee paid to Krško municipality are provided by the Krško NPP and the Fund for the Decommissioning of the Krško NPP. GEN allocates funds to the Decommissioning Fund, as well as for the aforementioned fees and compensations. In 2023, the total amount perceived by the municipality from the

[3] Decree on the Areas of Limited Use of Space due to a Nuclear Facility and the Conditions of Facility Construction in these Areas, Official Gazette RS n° 36/2004, as amended and Decree on the Criteria for Determining the Compensation Rate due to the Restricted Use of Areas and Intervention Measures in Nuclear Facility Areas entered into force, Official Gazette n° 92/2014, as amended.

NPP was €3,232,432, whilst the amount from the Fund for decommissioning was € 7,169,117, which totals €10,401,550.

Slovakia

Slovakia has made significant strides in its nuclear energy sector, with ongoing projects and innovative plans shaping its energy future. The recent commissioning of Unit 3 of the Mochovce NPP in September 2023 marked a major milestone, contributing 13% of Slovakia's total electricity consumption. Meanwhile, Unit 4 is set for completion by January 2026, bringing the country closer to energy self-sufficiency, with nuclear power expected to account for 80% of total energy production. The government has also approved plans for a new nuclear reactor in Jaslovské Bohunice, with an unprecedented capacity of 1,100–1,200 MW. Slovakia, alongside the Czech Republic and Poland, is part of the Phoenix project, and has received funding for a feasibility study on SMRs as part of a transition away from coal.

Municipalities like Kalná nad Hronom (2,057 inhabitants) benefit from specific nuclear facility taxes. The specific tax applies to nuclear facilities where fission occurs and electrical energy is generated. The amount of the tax depends on the distance from the nuclear facility, determined by the Act of the Slovak Republic on local taxes and the local fee for muncipal waste and small construction waste. In Kalná nad Hronom, the annual tax rate for land functionally connected with the construction of the nuclear facility is 25% of the tax base (depends on the type of land) and amounts to €133,000 per year. The budget of the municipality is €6,8 million. The biggest taxpayer in the municipality is the nuclear industry Slovenské Elektrárne, a.s. , which provides approximately one third of the total income. The largest income of the budget is the tax for lands and buildings, especially buildings under construction, like unit 4 of the NPP. In addition to the taxes for nuclear facilities, the municipalities and associations receive financial support, either to fulfill their goals or through foundations.

Slovenské Elektrárne, a.s. and the municipality of Kalná nad Hronom agreed in 2024 to reconstruct the Mochovce church and create a memorial for the village of Mochovce as part of a project by the UNESCO Chair for the Restoration of Architectural Heritage at Slovak Technical University in Bratislava.

Since 2011, Slovenské Elektrárne Endowment Fund at the Pontis Foundation[4] has been supporting projects focused on the energy efficiency of towns and villages, the integration of people without homes back into society, community activities of its employees and educating the employees' children when families find themselves in unfavourable life situations. They also support projects to develop cycling as an ecological, healthy sport and recreational activity. The fund operates based on grant calls announced in individual fields of support. Projects which apply for the grant calls are assessed by an expert committee composed of representatives of Slovenské Elektrárne, the Pontis Foundation and experts in the given thematic fields. In the first six years of its existence, the endowment fund has supported projects in the total amount of more than €1.2 million. The fund has supported three cycling routes in the vicinity of the NPP Mochovce. The municipality of Kalná nad Hronom is currently cooperating on the construction of a new cycle route of 20 km long that will connect Mochovce NPP with the nearest district town of Levice.

The Slovak Nuclear and Decommissioning company JAVYS established a fund which supports healthcare, social life and culture and education activities of the municipalities in the vicinity of operating nuclear facilities of Jaslovské Bohunice and Mochovce. For instance, in 2024, the Fund contributed €10,000 to local development of Kalná nad Hronom, supporting projects like playgrounds, recreation areas, and a municipal apiary.

Spain

In Spain, nuclear municipalities receive **three different types of taxes** from nuclear installations:

- BICE (Tax on real estate property with special characteristics). This tax is applied on the cadastral value of nuclear facilities. Each municipality hosting a nuclear reactor receives approximately €3-6 million per

[4] The Pontis Foundation is the largest grantmaking and operational foundation in Slovakia striving to contribute to transforming Slovakia into a better country. The Foundation implements activities in four strategic topics: corporate responsibility, education, transparency and inclusiveness.

reactor per year. This contribution provides critical funding for the development of local infrastructure and services.

- IAE (Tax on economic activities) calculated based on installed capacity. The municipality of Ascó (1,600 inhabitants) which has 2 reactors of 1,032 MW of installed capacity each, receives a tax of approximately €1.2 million annually. This tax is distributed among the municipalities located within 10km of the plant, although the hosting municipality receives approximately 75% of the total amount.

- ICIO (Tax on constructions, installations and works). A 4% tax is levied on the value of all construction, installation and renovation works carried out within nuclear faiclities. This tax directly benefits the municipality hosting the NPP. Since 2021, any works related to the General Radioactive Waste Plan are exempt from this tax. However, ENRESA can establish agreemetns to fund local projects up to 4% of the cost of the works.

Financial allocations to municipalities by ENRESA

Since 1988, **financial allocations** have been provided to the communities located near nuclear facilities. These funds are drawn from General Radioactive Waste Plan, which is managed by the radioactive waste management agency ENRESA. Besides Hornachuelos (the municipality hosting the LILW repository El Cabril), the Spanish legislation provides financial allocations to villages located within a 20 km radius of the facility. Different studies on the economic impact of El Cabril indicate a positive effect, including increased job creation and higher wages for local residents. These benefits also include the direct financial allocations from the operating company ENRESA (Espluga-Trenc and Prades, 2023).

In Hornachuelos, the municipality hosting the LILW repository El Cabril, the revenue for 2024 was estimated at €3,5 million, which included the property tax, the tax on economic activities, a motor vehicle tax and tax on the increase in urban land value. The allocation from ENRESA was estimated at €3,3 milion[5].

[5] https://hornachuelos.es/hornachuelos-aprueba-sus-presupuestos/

In total ENRESA has transferred an average of €26 million per year to 102 municipalities beneficiaries of this allocation. The seven municipalities hosting nuclear power plants jointly receive an annual average of 17% of this amount (€4,68 million), representing a relatively limited share of the total contributions made by ENRESA (AMAC, personal communication).

Co-financed projects

Since the promulgation of the corresponding national regulation in 1986, ENRESA is responsible for the provision of projects with the aim of contributing to the economic and social development of those communities located in the neighbourhood of a radioactive waste storage and disposal installation. The Order of 20 December 1994 authorises ENRESA to assign funds to local authorities hosting facilities for nuclear waste disposal or NPPs in which radioactive waste produced is stored or which are being dismantled and to those municipalities which can be defined as affected by these facilities. An amendment to the original regulation was issued in 2015, which introduced the provision of additional annual funds to support proposals for **co-financed projects** between the government, through ENRESA, and one or corresponding beneficiary communities, in order to contribute to economic and social development, as well as to environmental protection. Later on, in 2023, the regulation was again amended and the current distribution of allocation depends on three factors: population; distance from the facility and the percentage of the municipality within the facility's zone of influence. There is also a fixed allocation and a variable allocation with a maximum co-financed amount for projects.

In 2024, ENRESA approved a total of 23 projects in various municipalities with a total cofinanced amount of €1,773,357. The projects cover areas such as improvement of municipal infrastructure, development of energy communites, cultural heritage rehabilitation and creation of local economic opportunities. For 2025, ENRESA has provisionally approved a total of 23 projects with a total cofinanced amount of €2,679,818. The projects comprise municipal infrastructure (e.g. construction and improvement of public spaces, such as senior residents, sports paviilons, social centers), tourism and cultural development (e.g. rehabilitation of historic buildings, creation of tourist routes and revitalization of recreation spaces) and entrepreneurship promotion (e.g. construction of industrial buildings and training centres to stimulate the local economy).

Just Transition Fund

Within the strategic framework for energy and climate, the Spanish government created in 2019 the **Just Transition Fund** to mitigate the effects of the shut down of NPPs and to support the municipalities in transitioning to a sustainable and diversified economy. Zorita and Garoña are two examples of municipalities that have taken advantage of the Just Transition Fund to boost reindustrialization, tourism, and local development, ensuring a more sustainable future. Examples of funded areas include digitalization, employment, entrepreneurship, social housing, tourism development, and multipurpose spaces. The municipalities Zorita and Garoña, after the shut down of the NPP, attempt to adapt and modernize its infrastructure to foster local development and create opportunities for its citizens. In Zorita, more than 10 projects have been financed with a budget of €4 million, aimed at creating tourist infrastructure, senior residences and cultural centres. In Garoña, over €6.8 million have been invested in projects such as the development of recreational areas and the rehabilitation of historic buildings for tourism purposes.

Nuclear Transition Fund in the region of Catalonia

In the North East region of Spain, in Catalonia, which hosts 3 operating reactors in two sites, Ascó and Vandellós, the Catalan government created in the year 2020 the **Nuclear Transition Fund** to mitigate the impact of the closure of the NPPs. The Nuclear Transition Fund is led by the Secretary of the Business Department of the regional government who is the president. The mayors of the two municipalities hosting the reactors, Ascó and Vandellós, act as vicepresidents. The governing body of the Fund also includes representatives from unions, business associations, chambers of commerce and county councils from the nuclear areas.

The fund is financed by allocating 50% of the revenue generated from the environmental tax on the nuclear power production. The main goal of this fund is to finance projects related to energy transition and socio-economic development in the municipalities where the NPP will be shut down. The beneficiary municipalites are those within a 10km radius from the reactor (receiving 50% of the fund) and within 30km radius from the reactor (the remaining 50% of the fund). In 2023, the fund was mainly allocated to public projects submitted by municipalities focusing on energy transition (e.g. installation of solar pannels), job

creation and reindustrialisation of affected areas. In 2024, €3 million were allocated to projects proposed by municipalities and county councils. The remaining fund was allocated to private sector projects (e.g. new business opportunities, competitiveness and cooperative support, high impact business investments, etc). In 2025, the main objective will be to promote the participation of Small and Medium Sized Enterprises (SMEs) in projects that strengthen the local economy.

Agreement with the regulatory authority

The Spanish association of municipalities in nuclear areas (AMAC) has a collaboration agreement with the Spanish safety authority (CSN) to promote information, communication and training activities in nuclear areas and assessment of public opinion in nuclear areas. Specifically, a total of eight training sessions were conducted for students from secondary education institutes in areas near nuclear power plants and El Cabril and sessions with local elected officials and members of Local Information Committees to identify ways to improve the communication and information processes regarding the operation of nuclear facilities. The agrement also included visits to the information centre of the CSN. The budget for this agreement in 2023 was €70,000, with 63,000 contributed by the CSN and €7,000 by AMAC.

Sweden

Sweden does not have property tax arrangements, like Finland. All taxes (corporate tax, energy production tax, energy grid tax and Value Added Tax on energy) go directly to the State. On the other hand, there is also a tax equalization system. A part of the property tax payed by energy and nuclear companies goes back to the municipalities. In current discussions within the association of municipalities with nuclear facilities in Sweden (KSO) the members expressed the need to raise the tax situation with the government in connection with a report presented in September 2024 on financing and risk sharing models in the case of new nuclear.

State funding to the two nuclear waste municipalities Östhammar and Oskarshamn

The national Government decided in November 2024 that Östhammar and Oskarshamn will receive state grants for their work on nuclear waste issues connected to the stepwise judicial and environmental process regarding the HLW facility in Östhammar and the encapsulation plant and extension of the Interim storage Clab in Oskarshamn. The funds come from the state Nuclear Waste Fund. Therefore, the municipalities are able to follow the nuclear process and create a political organisation and employ staff to work on the nuclear topic.

Added Value Programme

The municipalities candidates to host the deep geological repositories (Östhammar, 22,400 inhabitants and Oskarshamn, 26 000 inhabitants) negotiated with SKB, prior to the siting decision in 2009, the so called "added value programme". The programme would provide a total of SEK 1,5 to 2 billion (approximately €160 to 215 million) of added values from 2010 until the end of the construction period, via projects in different areas: tourism, education and training (particularly in the energy sector), infrastructure (e.g. rail, road, harbour and technical infrastructure development), innovation and business development, development of non-commercial organisations and marketing activities for the municipalities. The programme is designed to enhance the overall conditions of the communities as a place to live, run businesses and promote new companies, for example, by promoting spin-offs, competence building, broadening the labour market and addressing housing and environmental issues. Other actions are related to establishing the headquarters of SKB and developing existing SKB facilities in both municipalities. At local level, SKB also supports events, sports associations and leisure activities.

The chosen community (Östhammar) receives 25% of the funds of the Added Value Programme, while 75% goes to the municipality where the construction of the repository will not take place (Oskarshamn, where the encapsulation plant will be built). It is important to emphasise that value does not equal cost outlay for a project, but rather, the resulting value.

The resources of the agreement are not taken from the State waste fund but from the nuclear industry. They are managed through a specially created steering

committee involving both communities and SKB Co. The steering committee have meetings every year and take decisions on the Added Value Programme every third year.

The largest investment ever since 2009 was decided by the steering committee in November 2024, called the Oskarshamn Package. The total amount is SEK 172 million (€14 million) for the years 2025-2030. The package includes the folowing projects for Oskarshamn:

- SEK136,5 million (€ 11,1 million): sport arena, leisure and sport associations.
- SEK8 million(€657,000): a visitors centre in central city of Oskarshamn where both SKB Co and OKG Co will have activities and information for the public. The nuclear facilities are not open to the public due to the increased terror threat.
- SEK20 million (€ 1,7 million): to increasing the number of inhabitants in the municipality.
- SEK7,5 million (€612,000): development of events and marketing.

Study about financing and risk sharing new nuclear in Sweden

On December 29, 2023, the Swedish Government appointed a special investigator to develop and submit proposals for models on financing and risk sharing for the construction of new nuclear reactors. According to the mandate, the proposed models must be designed so that nuclear power with a total output of at least 2 500 MWe – equivalent to the output of two large-scale reactors – must be in place by 2035 at the latest.

The findings of the report give rise to a discrepancy between the private investors business case for new nuclear power and the socio-economic equivalent. The report concluded that efficiency reasons provide a rationale for the State to support investments in new nuclear power.

In December 2024, KSO delivered a statement on the study to the Government. In the Statement KSO emphasises the importance of transparency, information and resources for the municipalities involved in the process for new nuclear in Sweden. KSO also noted that the municipal/local level was mentioned in the state report on financing and risk sharing when it comes to consequences for the public sector. Another important fact is that according to law there is a veto for

Swedish municipalities when it comes to permits for these kind of industrial localisations in a municipality.

Governmental missions regarding cooperation/collaboration and pilot studies on new nuclear

a) Funding from the authority for Natural Resources

The Government has given the State authority for Natural Resources a mission and funding for both existing nuclear municipalities and new municipalities willing to host new nuclear, both SMRs and large scale NPPs. The total amount is SEK15 million(€ 1,3 million). In December 2024, eleven municipalities were granted state funding for their pilot studies regarding new nuclear. Four of them have or have had NPPs in operation and the rest are new locations for this type of nuclear industry. There will be collaboration between the authority and the 11 municipalities to exchange experience and KSO will also be represented in the forum. The time for the pilot projects is short. The final project reports are to be delivered to the Authority on September 30, 2025. There was a second possibility for applications in January 2025. The municipality of Östhammar was approved €200,000 for 2024 (personal communication with the mayor of Östhammar).

b) Collaboration project with funding from the Government's Nuclear Coordinator

In November 2024 the National Nuclear Coordinator initiated a project concerning new nuclear for the public sector. The invited parties where County Governors, Regions and interested municipalities (both with nuclear facilities and non nuclear municipalities). The main focus is on how these public parties can prepare themselves for a future process regarding building new nuclear in Sweden. In 2025, the process is supposed to start and the Swedish Research Institute, RISE, is assisting the national coordinator in the process. About 15 parties attended the first meeting in November 2024.

Local Safety Boards

Since 1981, five local safety boards were established at local level in municipalities hosting nuclear facilities in Sweden (Kävlinge - Barsebäck NPP; Oskarshamn – Oskarshamn NPP, Nyköping – Studsvik research facility, Varberg – Ringhals NPP

and Östhammar- Forsmark NPP). Since 2023, only three of these committees remain active following the government's decision to abolish funding for those committees in municipalities with non-operating nuclear facilities. The state funding for each local safety board is SEK400 000 per year (€ 33,000). The main task, as laid down in the legal text, is to inform the public in a neutral way. Transparency between the owners of the NPP and the municipalities is also an obligation, according to law. The board members are all local politicians and they are appointed by the Government. KSO claims that the local safety boards have an important task to fulfill, particularly in the future if new nuclear is deployed in Sweden.

Switzerland

In Switzerland, tax rates are different in each municipality. Most of the taxes paid remain within the municipality and the canton, with only a small portion allocated to the federal government. Any remuneration received from the operations of a nuclear facility contributes directly to the local budget, reducing the financial burden on taxpayers by offsetting the amount that would otherwise need to be collected. The budget has to be accepted by the local community members through two annual community meetings (direct democracy).

The **Beznau NPP** with its two reactors is the oldest in Switzerland, located near important consumer centers in the lower Aaretal, and serves as a baseload power plant. Axpo Power AG, the sole proprietor and operator of the Beznau I and II NPPs is subject to a regular profit tax. In addition, there is a *special fund for regional tasks*. Depending on the receipt of Axpo Power's stock tax, the fund will receive up to a maximum of CHF 3 million per year (€3 million).

The **Mühleberg NPP** serves as a baseload power plant and is located near the important consumer center Bern. The operator BKW Energie AG10 decided to decommission the NPP on December 20, 2019. The siting municipality of Mühleberg does not receive any regular and predefined financial contributions in addition to tax revenues from the BKW Energie AG.

The **Gösgen NPP** generates approximately one-seventh of Switzerland's electricity consumption and is located between Olten und Aarau in the canton of Solothurn. Its operator concluded two tax agreements, one with the canton of

Solothurn and the other with ten municipalities whose settlement centers are located within a radius of 4 km around the plant. In 1995, the operator agreed to an additional annual payment to the development systems of the municipality of Däniken.

The **Leibstadt NPP** is the newest and largest in Switzerland and lies on the Swiss banks of the Upper Rhine near the mouth of the River Aare. The municipality of Leibstadt receives an annual contribution for the foundation *Pro Leibstadt* from the operator of the NPP. The foundation supports cultural and non-profit projects in the community. Eight neighboring municipalities, three of them in Germany, receive funding for cultural, social and sporting projects via the *fund for neighboring municipalities*, also funded by the operator of the NPP.

Since 2001, spent fuel elements and other radioactive wastes have been transferred to the **Zwilag** storage facility in Würenlingen. Three of the five Swiss NPPs are in the immediate vicinity; transport routes are therefore short. Zwilag stores both LILW and HLW. Both the **municipality of Würenlingen** and the four neighboring municipalities receive indexed annual payments. The site municipality receives one third and the neighboring municipalities two thirds. The contract between the local municipality of Würenlingen and the Zwilag was extended on November 23, 2017. The remuneration payments will be maintained. Würenlingen currently receives CHF1,938 million (approximately €2 million) per year. Thereof, CHF 688,609 (approximately €740,000) are available to neighboring municipalities.

Deep geological repository

Switzerland's national radioactive waste disposal cooperative, Nagra, submitted the applications for the construction of the deep geological repository and a used nuclear fuel encapsulation plant on 19 November 2024. The site of Nördlich Lägern in northern Switzerland was proposed for the repository in September 2022, after a 14-year site selection process.

Municipalities expect to receive payments related to the deep geological repository, although these are not regulated by law. The Swiss Federal Office of Energy mandated the Chair of Negotiation and Conflict Management of Federal Technical University ETH Zurich in 2017 to develop a framework for this negotiation process. The preparation of the negotiation framework was in itself a

negotiation among the different parties. The negotiating framework was adopted by all parties involved, including the neighbouring German municipalities and twenty people signed the document on 22 September 2017. If a negotiated contract exists, it requires the approval of 60 percent of the municipalities in the siting region or the infrastructure municipalities within two years.[6]

United Kingdom

The nuclear landscape in the UK is highly diverse, encompassing a range of sites from former nuclear stations undergoing decommissioning and remediation to major new builds, like Hinkley Point C along with waste storage and waste management facilities.

Hinkley Point C is the largest nuclear construction project in Europe and has involved multiple agreements between the developer, EDF, and local authorities to address socio-economic, environmental and infrastructural impacts. These agreements include:

- A Planning Performance Agreement (PPA) signed by the local planning authority and the developer, explained in the next section.
- Socio-economic group supported by EDF and Somerset Council. This group focuses on the broader socio-economic impacts of the project and provides community funds ranging from €10,000 to 20,000 to support local initiatives.
- Good neighbor agreement aimes at mitigating local impacts related to traffic, noise, environmental concerns, housing and tourism.
- Infrastructure agreement valued at £100 million (€120 million), this agreement focuses on accommodation, park and ride facilities, bypass construction, harbour development and road improvements.

[6] https://leagueoflawyers.net/articles/financial-compensation-in-connection-with-deep-geological-repositories/

- Skills training initiative with a budget of £24 million (€29 million), targets deprived areas and established a national skills centre to provide training and enhance local employment opportunities.

- Community impact mitigation fund allocated £3.2 million (€3,9 million) annually, amounting to £128 million (€154 million) in total, this fund was tied to the generation of electricity and aimed at addressing broader community impacts.

Planning Performance Agreement (PPA) for nuclear new build

PPAs are usually used for larger scale complex developments such as nuclear new build. A PPA is a legally binding contract and a project management tool used by local planning authorities and developers to agree timescales, resources and actions for managing complex planning applications. In the case of Sizewell C, the PPA also supports the "development consent order" required, as a designated Nationally Significant Infrastructure Project. By being required to make the necessary resources available to councils to fully engage, the developers are contributing to the costs incurred and staff resource needed by Councils to determine major projects. If through lack of resources councils are disadvantaged from engaging then the democratic process would be argued to have been excluded.

Low Level Waste Repository

The Low Level Waste Repository (LLWR) in the UK has a Socio-economic Fund which awards £85,000 every year to support local groups and projects. In addition, the local authority, Cumberland Council, hosts the Copeland Community Fund which is funded by Nuclear Waste Services (NWS) in recognition of the service the West Cumbrian community provides to the nation by hosting the LLWR close to the village of Drigg. The Fund provides grants to a wide range of non-profit organisations within a 30-mile radius of the Repository site. The activities funded must align with the Nuclear Decommissioning's Authority Social Impact and Communities Strategy 2020-2026 (NDA, 2020). The Copeland Community Fund is approximately £1.6 million (€1,9 million) per year, in addition to an initial endowment of £10 milion (€12 million).

Geological Disposal Facility process

UK Government policy requires that any community formally engaged in the geological disposal facility (GDF) siting process be provided with Community Investment Funding. NWS has developed guidance for communities that sets out the approach "Community Guidance. How we will work with communities in England" (NWS, 2018). This states that "the Government will make available Community Investment Funding of up to £1 million (€1,2 million) annually for each community that forms a Community Partnership. This investment will rise to £2.5 million annually per community for those communities that progress to the point of deep borehole investigation [..]. The Community Investment Funding can be used to fund projects, schemes or initiatives that provde economic development opportunities, enhace the natural and built environnment or improve community well-being". In addition, "Engagement Funding will be provided througout the siting process. It is intended to support the activities of the Working Group[7] and the Community Partnership" (ibid).

As of February 2025, a total of £11.86 million (over €14 million) has been awarded to over 260 local projects across the counties of Cumberland (two active GDF Community Partnerships) and Lincolnshire (one active GDF Community Partnership).

In one of the candidate areas to host a deep geological repository, Lincolnshire, a Community Hosting Agreement has been proposed, drawing inspiration from Canada's experience in engaging communities in hosting such facilities. The Council's requirements include[8]:

- Enhancing the wider strategic plan to protect the Lincolnshire coast from flooding.

[7] A Working Group is formed by an interested party, NWS, an independent chair and a facilitator to identify the geographical area within which NWS will seek potentially suitable sites for a geological disposal facility. All relevant principal authorities must be invited to join the Working Group. The Working Group will develop into a Community Partnership which will include community members, organisations, NWS and at least one relevant local authority.

[8] https://www.lincolnshireworld.com/community/council-considers-hosting-agreement-for-proposed-nuclear-waste-facility-in-theddlethorpe-4884686

- Improving key routes as well as roads in local towns.
- Supporting bus and rail transport, along with rail freight, to ensure their viability in the area.
- Upgrading local school infrastructure.
- Establishing a sector-based training centre to help individuals and businesses secure jobs or contracts related to the geological disposal facility.
- Providing a better and more reliable energy source for local communities, ensuring all energy infrastructure is developed without harming the visual environment.
- Investing substantially in the Lincolnshire Coastal Country Park to promote the environment and boost green tourism.
- Delivering a programme to assist local businesses in growing as a result of the geological disposal facility, alongside significant investment in the area's tourism sector.

The grants of the Community Investment Funding of the Community Partnerships, are administered by a Community Investment Team. This Team supports the Community Investment panel and those organisations who apply for and receive grants. The grants can be used to fund projects, schemes or initiatives that provide economic opportunities, enhance the natural and built environment or improve community well-being. The grants are available in three tiers: up to £10,000 (€12,000), up to £50,000 (€60,300) and over £50,000. Some of the projects funded include, for instance:

- Cumbria Community Foundation (granted £49,812) to support the Foundation's Winter Warmth Fund provding individual grants to those over 60 who receive a state pension and/or pension credit or

struggle to maintain a basic acceptable standard of living during the winter.

- Inspira (granted £13,614) to fund a school engagement programme offering students direct access to a range of employers and information on employment opportunities.
- Millon Baptist Church (granted £40,000) to replace the wooden flooring in the community hall an remova and replace the old stairs, storage areas and toilet.

Further into the future, the community that eventually hosts the GDF in the UK will receive "Significant Additional Investment" to support infrastructure enhancement and other projects. This is likely to be a much larger sum, potentially hundreds of millions of Great British Pounds.

NDA Social Impact and Communities strategy

The **Nuclear Decommissioning Authority** (NDA) is an executive non-departmental government body charged with decommissioning of UK's earliest nuclear sites. The NDA has a legal duty under the Energy Act (2004) to take care of the impact of their activities on communities living near the NDA sites. Through the NDA Social Impact and Communities strategy, £15 million was invested in direct socio-economic funding in 2023/2024 with a particular focus on three communities seen as priorities for support – West Cumbria, North Wales and North Sutherland (Dounreay). For this, NDA works in partnership with local stakeholders to better understand the economic priorities of their communities. The NDA Social Impact and Communities Strategy aims to deliver against six strategic themes: resilient economies, thriving communities, sustainable incomes, sustainable growth, social value chains and collective impact. Some examples of projects funded include contributing to the establishment of a new centre for severe mental health issues, revistalise a bus station to become a co-

working space, establishing a skills hub to access STEM training, funding an officer to provide support for rural areas facing several challenges, etc.[9]

UKAEA Supply Chain Charter

United Kindgom Atomic Energy Authority (UKAEA) leads the delivery of sustainable fusion energy. It is interesting to mention their Supply Chain Charter, outlining its commitment to supporting SMEs by driving economic and social value and creating new high-tech jobs in the UK. The charter emphasizes open procurement processes, understanding the skill investment needs of partners, and encouraging supply chain partners to reduce their environmental impact. However, no specific targets associated with these goals are mentioned.[10]

9 Further information: https://www.gov.uk/government/publications/nda-socio-economic-report-2023-to-2024/nda-socio-economic-report-2023-to-2024
10 https://www.gov.uk/government/publications/ukaea-supply-chain-charter

5. Guidelines for community agreements on SMRs

The host community agreements described in this report demonstrate the varied approaches to managing the complex interactions between nuclear projects and their host communities, ensuring a balance between development and local well-being. The agreements are considered a common practice to distribute project benefits and mitigate adverse project impacts. They cover from a monetary inducement to a community to training and employment opportunities, local business contracts, local infrastructure development or empowerment measures and can be legally imposed or locally negotiated. Whichever model is applied, it is important to highlight that there is no one-size-fits-all approach to the community agreements, as the aspirations of the parties and the context vary. Communities need to find out what is relevant for them, their needs, expectations and aspirations and negotiate accordingly.

In general, the agreements are negotiated between the host community and the operator /nuclear industry or the implementer/radioactive waste management organisation. References of agreements with the regulatory organisations are scarce or have not been signalled by the mayors contacted for this study. As far as we know, agreements for SMRs are still not available. However, agreements related to geological disposal seem to be more common practice.

The purpose of this section is to support potential hosting communities to negotiate community agreements in relation to SMRs, which move beyond meeting the minimum expectations and help to cement the basis for long-term relationships. While it provides guidance, it is not intended to be an exhaustive list of all the elements of a community agreement on SMRs. Representatives of the local community considering an agreement with the SMR proponent, should carefully assess their community's underlying conditions. These may include factors such as a significant inflexible community opposition to the project, a legacy of mistrust toward the proponent, insufficient capacity or commitment to prepare, negotiate and/or uphold agreement obligations, and potential issues like corrupt practices within involved organisations. Opportunities exist to integrate long-term socio-economic development goals and align with

community aspirations. Examples of community agreements are shown in Figure 3. The participatory practices in decision-making related to new nuclear facilities require special attention. Residents, community members and other relevant stakeholders have a key role in co-designing interventions which are vital for the community well-being. There are a diverse range of tools to engage with the public. Depending on the engagement context, purpose, budget, resourcing and time available, one method may be more effective and appropriate than another.

Figure 3. Examples of community agreements benefits

When negotiating a community agreement, the five core elements to take into account to start negotiating include the following (shown in the Figures 4 and 5 and Box 1):

1. **Build knowledge and understanding of the community context**: the developer will need to gain a detailed understanding of the legal, historical, socio-economic and cultural environment in which it operates. The knowledge base will help to articulate the aspirations of the community, the understanding about the land, its value, cultural significance and uses, and customs of communities.

2. **Develop community's capacity**: secure resources that allow the community to become more knowledgeable about the issues involved and to build the competences to contribute to making sound decisions and engage effectively.

3. **Ensure early, inclusive, regular and meaningful engagement throughout the project life cycle**. Agreeing on engagement principles and processes at an early stage can help to manage expectations and build trust between the developer and the local community. A structured engagement process clearly identifies objectives for engagement, using tools tailored to local context and understandandable easy accessible information and two way communication. Vulnerable groups have legitimate and competent representation and are enabled and supported to engage on an equal footing.

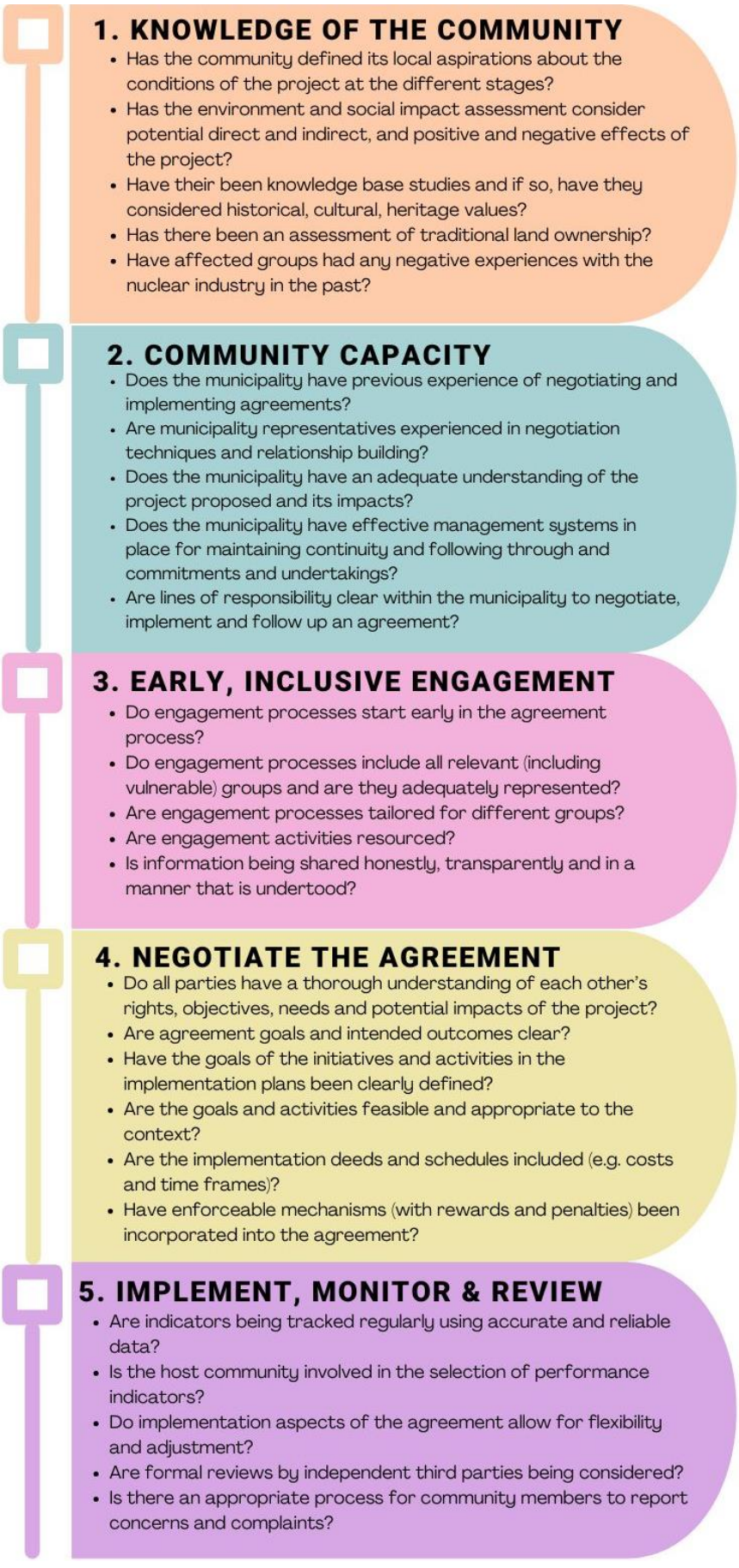
4. **Negotiate the content of the agreement**: the agreement should reflect the parties' interests and priorities and align with the priorities of the local community and respond to the long terms aspirations. Agreements should have clear goals over the intended outcomes, define governance structures, provisions for implementation and for review. The agreement should contribute to the social and economic development of the areas in which they will operate: promote long-term benefits to communities beyond the life of the facility; significant opportunities for labour from the local communities; etc.

5. **Implement, monitor and review agreements**. Community groups can support the monitoring and review by providing feedback. Reviews should

not only be used to prove that commitments have been delivered, but also to identify opportunities to improve the agreement.

Figure 4. Steps for negotiating a community agreement

Figure 5. Checklist to negotiate a community agreement



Box 1. Key components of a community agreement

The **community agreement for SMRs** should be comprehensive, addressing a variety of aspects to ensure a sustainable collaboration. Key components of the agreement include:

Project overview: description of the project, size, technology, timeline and clear definition of roles and responsibilities of the proponent and the host community.

Community benefits: financial contributions (taxes, grants, direct payments, revenue-sharing arrangements); employment and economic opportunities (workforce training programmes, supply chain, procurement of local goods and services, subsidies and grants...); infrastructure development (e.g. construction or upgrade of access roads, retoration of local buildings) or additional activities or facilities (e.g. information and/or training and research centres, archives, conference facilities);

Safety and emergency preparedness: regular safety drills and public education pgroorammes, funding and trainng for local eemergency services;

Transparency, openness and accountability: provision of clear, accessible and updated information; actively listen and address resident's fears and concerns; regular reporting and communication mechanisms; reviews by independent thrird parties; mechanisms for the community to participate in oversight and decision making;

Community engagement: processes for engagement with the community and recognition of vulnerable groups and inclusion of expertise and values;

Education and capacity buiding: internships and partnerships with local schools and universities, suppport to education or funding for school projects or educational programmes on environmental issues or science and technology topics;

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