Inverters

The people behind energy inversion

Inversion has a name.

Eight stories of people who gave citizens, shops, an airport, a water utility, a heating company and communications networks a productive role in energy.

Ursula Sladek, 2012. Archival portrait cropped by the source uploader from an event photograph. Molgreen / Wikimedia Commons · CC BY-SA 4.0

Masayoshi Son, 11 July 2008. Archival portrait extracted by the source uploader from an event photograph; predates the energy initiative. Masaru Kamikura / Wikimedia Commons · CC BY 2.0

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An illustrated editorial report with 32 linked sources.

EDITORIAL

A small revolution, with people in it

Inversion has a name. Sometimes it is the person who signs the investment. Sometimes it is the engineer who keeps asking a difficult question, the neighbour who organizes a vote, or the operator who has to make the new arrangement work on a cold Monday morning.

An energy bill seems to describe a permanent relationship: somebody else produces; you consume and pay. The people in this collection made that relationship negotiable. They took responsibility for generation, for the network, for waste that contains energy, or for batteries that can earn money while protecting an essential service. The customer acquired another role: owner, producer, operator, seller.

That is a small revolution. Its scale can be a town, a treatment plant, a supermarket group or an airport. Its human difficulty is recognizable at every scale. Someone has to commit before the result feels obvious. Someone has to explain the unfamiliar proposition to colleagues and neighbours. Someone has to remain accountable after the opening ceremony.

Fuck the system. Fuck the grid. Let's build our own.

This is XPower's editorial provocation, supplied for this collection. None of the people profiled here is being quoted in that line. Their actual words appear separately, with sources. Their working projects often exchange power with the grid, and some make their income by helping it function. The useful rebellion is the refusal to accept permanent passivity.

Eight lead profiles follow. Six revisit organizations in the Inverted review. Two community precedents, Schönau and Samsø, broaden the story to citizens who became energy owners. Each profile separates a documented personal role from the work of the larger team. These are portraits of consequential decisions, rather than endorsements of every position or business activity of their subjects.

The word hero belongs here as an editorial judgement about initiative and responsibility. The evidence is more specific: an acquired grid, an operating generator, a buyer for surplus electricity, or a commercial flexibility service. Some cases prove income; some also show benefits flowing back to customers. A positive energy balance alone does not establish net financial profit.

READING MAP

The people

After the profiles

01 / COMMUNITY OWNERSHIP · GERMANY

Ursula Sladek

The parents who bought the grid

Co-founder and historical leader of Elektrizitätswerke Schönau (EWS), working with Michael Sladek and a citizens' initiative.

Ursula Sladek, 2012. Archival portrait cropped by the source uploader from an event photograph. Molgreen / Wikimedia Commons · CC BY-SA 4.0

> *“So the only way to make a change was to become a grid owner ourselves.”*
>
> Ursula Sladek, Goldman Prize interview, 3 May 2011. Original English publication. [1]

A problem that entered the home

After Chernobyl in 1986, the energy system ceased to be distant infrastructure for Ursula Sladek. A mother of five, trained as a teacher, she was confronted with questions about gardens, food and children's play areas in her Black Forest town. She and other parents began learning how electricity was produced and who had the power to change it. Their first tools were conversations and energy-saving initiatives. [1, 2]

Learning to become the owner

The citizens discovered that a willingness to save energy and support small renewable plants did not give them control over the local network. The incumbent utility rejected their demands, according to EWS's historical account. A proposed early renewal of its concession threatened to close the opening for change. The initiative organized, raised funds and contested the decision through local votes. In 1997, the citizen-led company finally took over the Schönau grid. [2, 3]

The people behind the surname

Ursula is the recognizable face, but the history also names Michael Sladek, Wolf Dieter and Sabine Drescher, participating families, investors and donors. Their practical invention was a way for people without an established utility company to assemble one. The ten-year interval matters. It puts patient learning, campaigning and institution-building inside the story of courage. [1, 3]

The starting point was a parent's concern. The destination was an electricity company owned by citizens.

THE PROJECT / URSULA SLADEK

The decision made visible

What they built

A local distribution network became the foundation of a citizen-led energy business. EWS supported decentralized generation, including small hydro, photovoltaics and combined heat and power, and developed an electricity supply business beyond Schönau. The project can be seen in ordinary streets and buildings as well as in generation assets: ownership changed an essential service already woven into everyday life. [2, 3]

Where the economic role reversed

Electricity customers became investors and co-owners in an enterprise supplying electricity. The Goldman Prize's 2011 profile reported cooperative dividends and substantial reinvestment in renewable projects. Those are dated observations, not a statement of today's dividend rate. The important inversion is institutional: citizens gained a claim on the productive business and a voice in its direction. [2]

What made this a revolution

This case contains a documented confrontation with an incumbent. Sladek herself described the grid purchase as the route to change. In XPower's reading, its lasting achievement was the transfer of agency: people who had been told what electricity was available learned to take responsibility for supplying it. That responsibility included the unglamorous work of running a utility. [1, 3]

1986	Parents organize after Chernobyl.
1991 / 1996	Local votes open and defend the path to citizen control.
1997	EWS takes over the Schönau grid.

Evidence boundary

Community-ownership precedent. Grid ownership and electricity supply are established; this profile does not claim that every participating household earns more than its full energy expenditure.

Read Sladek's own account · Historical photographs and community story

02 / COMMUNITY ENERGY · DENMARK

Søren Hermansen

Making the neighbours co-owners

Samsø island organizer and the renewable-energy initiative's first employed staff member; associated with the Samsø Energy Academy.

“We care about the production, because we own the wind turbines.”

Søren Hermansen, interviewed by Elizabeth Kolbert, The New Yorker, 2008. [5]

A local person with a new job

Hermansen grew up on Samsø and trained as a farmer. When the island was selected for Denmark's renewable-energy initiative in 1997, he became its first employee. His work connected farmers and other residents to joint ownership and participation. The biographical account published by Indigenous Clean Energy emphasizes precisely this local position: he knew the people whose involvement the transition required. [4]

The difficult part was social

A technically attractive plan still needed people willing to participate. Hermansen's contribution was sustained organization around a shared local future. Research by Karl Sperling identifies a combination of cooperative traditions, local networks, entrepreneurial individuals, public support and expert assistance behind Samsø's success. An intermediary had to connect these ingredients to the community's own needs. That is a useful description of leadership that rarely appears on a turbine specification sheet. [6]

An achievement others could visit

The Energy Academy became a place where other communities came to learn. A 2021 visit documented by the European Commission's island-energy initiative focused on understanding residents' interests and building shared goals. The transferable work was communication, participation and ownership, alongside equipment. Hermansen's story gives a human face to this capacity to bring people into a project. [4, 7]

A farmer understood that the island's most important resource was its ability to act together.

THE PROJECT / SØREN HERMANSEN

The decision made visible

Samsø Energy Academy, Denmark, 9 March 2010. Atle Grimsby / Wikimedia Commons · CC BY-SA 3.0

What the island looks like

Samsø's energy transition is visible in wind turbines and local heat infrastructure, distributed across a lived-in farming landscape. In 2008, The New Yorker described eleven large onshore turbines, ten offshore turbines and shareholders receiving dividends. The same account explains that electricity still moved both to and from the wider grid. [5]

The change in economic position

Joint ownership gave residents a route into the productive side of energy. Hermansen's mentor biography emphasizes community participation in local energy companies. [4] For this report, an annual energy balance is assessed separately from continuous electrical independence. A community precedent also needs a different accounting boundary from a single company's consolidated results.

What XPower takes from the story

A person can lead an inversion by making it socially possible. In this reading, Hermansen's distinctive contribution was to connect a technical proposition to relationships, local identity and the possibility of participation. Ownership gave people a reason to keep paying attention after the first meeting. The research also gives proper weight to the enabling institutions around them. The small revolution had neighbours, advisers and public support. [6]

1997	Samsø is selected as Denmark's renewable-energy island.
Following decade	Community participation and energy infrastructure develop together.
2021	The Energy Academy hosts another island seeking to learn from the transition.

Evidence boundary

Community-owned production and historically reported shareholder income. Annual balances and historical outcomes should not be read as proof of permanent electrical islanding or universal household profitability.

Meet Hermansen · Watch his TEDx talk

03 / TRANSPORT · INDIA

V. J. Kurian

An airport that learned to produce

Managing Director of Cochin International Airport during its 2015 solar milestone; a civil servant and central figure in the airport's development.

“We did not want to be identified as just another airport and be confined to it.”

V. J. Kurian, telephone interview with Quartz, 20 August 2015. [8]

A manager's eye for wasted energy

A retrospective interview records an earlier episode in Kurian's public-service career. At an Ayurvedic medicine producer, he noticed that a heating process was stopped for lunch and then restarted. A change in shifts improved productivity, according to his account. The anecdote is revealing without needing to be made into a legend: operational habits can hide costs that a manager is able to question. [9]

From a working trial to a larger commitment

At Cochin, CIAL Infra installed a 1 MWp solar plant in 2013. Its success encouraged a 12 MWp installation beside the cargo terminal, commissioned in August 2015. Kurian was the airport's managing director at the milestone. The sequence is important: a functioning smaller installation created the basis for a much larger decision. The airport's energy requirement became a reason to develop an owned production business. [8, 10]

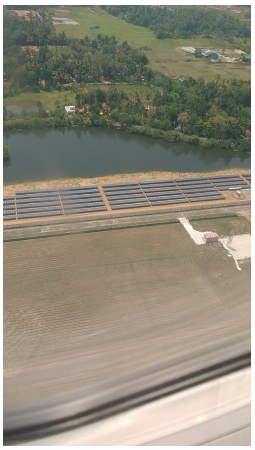
An institution with many authors

CIAL's own history credits founding chairman K. Karunakaran and a broad public-private investor base in creating the airport. Its engineering teams, subsidiary, contractors and board belong in the energy story too. Kurian represents the leadership period in which the solar breakthrough happened. S. Suhas took over as managing director in June 2021; subsequent expansion should receive its own credit. [11]

The terminal still had to work. Around it, the airport built a second capability: generating electricity.

THE PROJECT / V. J. KURIAN

The decision made visible



Solar arrays at Cochin International Airport, seen from an aircraft, 13 March 2017. Pradeep Mohandas / Wikimedia Commons · CC BY-SA 4.0

What visitors can see

Solar generation occupies ground near airport facilities, roofs and carports. CIAL Infra's project history describes repeated additions as terminal demand grew. It also records a setback: a canal-top installation was dismantled and relocated after the floods of 2018 and 2019. The visible achievement includes adaptation to a difficult site, beyond the original commissioning photograph. [10]

The money has a boundary

CIAL Infra's FY2025/26 accounts disclose INR 374.748 million in power sales, of which INR 313.229 million was to the parent company. Subtracting the parent amount leaves INR 61.519 million outside that disclosed relationship. This distinguishes a real energy business from the claim that all its sales are new income to the airport group. The same accounts describe a 50 MWp solar portfolio and a 4.5 MW hydropower project. These are later institutional outcomes, not all projects personally delivered by Kurian. [12]

The small revolution

An airport acquired the capability to produce an input on which it depended. The earlier management supplied a working precedent that later teams could expand. In XPower's reading, Kurian's story is the courage to widen an institution's idea of what it can competently do, while remaining responsible for its original service.

2013	CIAL Infra installs a 1 MWp solar project.
August 2015	A 12 MWp addition establishes the airport's solar milestone.
June 2021 onward	New airport leadership continues the institutional story.

Evidence boundary

Solar-powered refers to the airport's electricity model. It does not mean solar-powered aircraft, round-the-clock standalone supply, or proof that the whole airport group's energy cash balance is positive.

Kurian's 2015 interview · Official project photographs

04 / RETAIL · BELGIUM

Jef Colruyt

The supermarket's horizon moved offshore

Colruyt Group CEO from 1994 to 2023; a long-term corporate sponsor of the retail group's energy development. Delivery also depended on specialist teams and investment partners.

“For JERA, the Transaction is as much about people as it is about projects and pipeline”

Nathalie Oosterlinck of JERA, on the Parkwind acquisition, 22 March 2023. A counterparty's statement, not a quotation from Jef Colruyt. [17]

A retail culture that could become an energy capability

Jef Colruyt succeeded his father as CEO in 1994. The group's environmental charter already existed, and its business had a long emphasis on efficiency. The company dates its first private wind turbine at Halle to 1999, supplying logistics activities. This was a practical connection between an established operating need and a new productive asset. Jef's role belongs in that continuing institutional history. [13]

The decision that changed the scale

Parkwind's history describes a much larger step in 2009: Colruyt Group, Korys and PMV took the lead in the financially troubled Belwind project. Turbines went online in 2010, and Parkwind was created in 2012. A business rooted in shops and distribution now participated in a platform capable of financing, building and operating offshore wind. The documented challenge was commercial and technical exposure in unfamiliar territory. [14]

Put the delivery team in the picture

The specialist history names François Van Leeuw in financing and development and Eric Antoons in construction and operations. Their work makes the attribution more accurate: a corporate sponsor creates room for a new activity; specialists turn that commitment into power plants. A profile of Colruyt should leave the reader able to recognize both kinds of contribution. [14, 17]

The familiar discipline of a low-cost retailer opened a path into the unfamiliar world of offshore wind.

THE PROJECT / JEF COLRUYT

The decision made visible

Belwind offshore wind farm on Bligh Bank in the Belgian North Sea, 2 October 2012. © Hans Hillewaert / Wikimedia Commons · CC BY-SA 4.0

What the project became

The portfolio developed from individual Belgian offshore projects into an international platform. In March 2023, the acquisition announcement described four operating Belgian projects with 771 MW of gross capacity, alongside the German Arcadis Ost 1 project under construction. These were substantial generating assets and an organization able to deliver more of them. [17]

The economic proof is a transaction

Virya completed the sale of 100% of Parkwind to JERA on 26 July 2023 for approximately EUR 1.6 billion, net of debt and transaction costs at Virya level. At closing, Virya said the transaction was expected to produce a large one-off positive effect in Colruyt Group's consolidated result. The transaction is evidence of energy-asset value realized, separate from recurring electricity income and from the retailer's annual energy bill. [15]

Hear the sponsor, credit the builders

A 2015 WindEurope interview presents Jef Colruyt discussing the group's investment in wind and its connection to low costs and efficiency. The original video is linked here rather than reconstructed as an invented quotation. XPower's reading of the case is that long-term sponsorship allowed a modest operational idea to become a specialist business with value beyond the original retail load. [16]

1999	Colruyt Group's own history dates the Halle turbine to this year.
2009 / 2012	Belwind investment followed by the creation of Parkwind.
July 2023	The Parkwind sale closes at approximately EUR 1.6 billion.

Evidence boundary

Historical corporate energy development and asset realization. Parkwind changed ownership in 2023. Its full capacity is not a current wholly owned retail asset; the sale value is not annual profit.

Watch Jef Colruyt on wind investment · Meet the Parkwind team and projects

05 / WATER AND WASTEWATER · UNITED STATES

David Williams

The man who welcomed the unwanted

EBMUD Director of Wastewater at the utility's 2012 waste-to-power milestone, working with plant staff and the utility's governing board.

“We've turned wastes into commodities.”

David Williams, EBMUD announcement, 3 April 2012. Apostrophe normalized. [18]

An uncomfortable proposition

Williams recalled that some people considered the team crazy for bringing fats, oils and grease into the wastewater plant. EBMUD chose to treat selected organic wastes as a resource with high energy value. The change began with how the incoming material was understood. [18]

A public-service reason to change

The same announcement connects the project to California's earlier energy crisis and the need to control costs. This was an essential service with a serious operating burden. A new 4.6 MW turbine added the ability to convert more of the plant's biogas into useful electricity, supplementing three existing engines. The utility announced that it could sell excess power to the grid. [18]

A leader inside a much larger operating team

Williams was the named wastewater director explaining the shift, and Board President John A. Coleman publicly supported the achievement. Operators had to receive and process the material, maintain equipment and continue treating wastewater. EBMUD's current description places public health and environmental protection at the centre of the plant's job. The energy business sits inside that duty. [18, 19]

Grease, food residues and sewage became inputs to a plant that could send electricity out through its meter.

THE PROJECT / DAVID WILLIAMS

The decision made visible

EBMUD's Main Wastewater Treatment Plant in Oakland, California, 17 March 2008. The photograph predates the 2012 expansion. U.S. Environmental Protection Agency / Wikimedia Commons · Public domain

What the plant does

At the Oakland treatment plant near the Bay Bridge, wastewater solids are supplemented with high-strength organic material. Digestion yields gas that can fuel electricity production. EBMUD says the resulting renewable energy exceeds onsite power requirements. The same facility continues to treat sewage for communities along the eastern shore of San Francisco Bay. The productive asset is a working treatment system with an expanded resource-recovery role. [19, 20]

A buyer on the other end

In October 2022, the Port of Oakland announced a ten-year agreement to buy EBMUD renewable electricity, with an extension option. The buyer's own announcement gives the inversion a particularly useful form of evidence: there is an external customer. The plant's surplus became part of another organization's supply. The public-service relationship between infrastructure operators carried the energy relationship. [21]

The revolution in professional common sense

The transformation is unusually close to the XPower thesis. A required treatment process gained a saleable output, and material that others needed to dispose of helped support that output. Williams deserves attention for articulating and leading the shift within a utility. The plant staff deserve attention for making the changed process repeatable. The supplied sources establish surplus and sales; they do not publish a complete net energy-profit calculation for this profile.

Before 2012	The organic-waste programme develops over years.
April 2012	EBMUD unveils its expanded waste-to-power capability.
October 2022	The Port announces a long-term purchase agreement.

Evidence boundary

Documented onsite surplus and external electricity sales. Food-waste receiving income, electricity receipts, operating costs and capital costs must remain separate when assessing net profitability.

Read Williams's original statement · Watch his 2012 presentation

06 / DISTRICT HEATING · DENMARK

Morten Rauhe

The operator who can lower the bill

Technical operations manager, Hvide Sande Fjernvarme. A named operator and first-hand witness of the system's economics; not presented here as its sole founder.

“That way, we could sell the surplus electricity at a higher price than budgeted.”

Morten Rauhe, METRO THERM interview discussing 2022. Danish original; English translation by XPower. [22]

A recognizable working person

Rauhe is introduced by his job at the heating company. He is the person who explains what the combination of assets means for customers. The utility's own staff page lists him as technical operations manager, alongside colleagues with operational and administrative responsibilities. This is the part of the energy transition where the promise has to survive a shift rota. [24]

The wind entered the heat business

In the supplier-hosted interview, Rauhe describes a system whose heating company purchased three wind turbines in 2018. Surplus power sold at stronger-than-budgeted prices supported reductions in customers' heating bills. The article reports a 63.5% reduction during 2022. That is a specific historical result, tied to that year's prices and operation. [22]

There is no finished system to walk away from

In a February 2026 interview with the Danish district-heating association, Rauhe discusses the value of having several energy sources available. The account describes a 10 MW electric boiler, a heat pump of about 4.6 MW and 6,100 cubic metres of heat storage across three tanks. His leadership is visible in operating flexibility and explaining its consequences, with the community utility behind him. [23]

The result reaches people in the most ordinary place: the bill for keeping their home warm.

THE PROJECT / MORTEN RAUHE

The decision made visible

A beach-side wind turbine at Hvide Sande, Denmark, 25 August 2015. One turbine is visible; the image predates the reported 2018 acquisition. News Øresund - Johan Wessman / Wikimedia Commons · CC BY 2.0

What the town has assembled

Hvide Sande combines wind electricity, solar thermal heat, electric heat production, storage and backup equipment. These components create operating choices: produce heat, retain it for later use, or earn from electricity-market conditions while meeting the heat obligation. The operating account describes a move from dependence on natural gas toward a much more varied production system. [22, 23]

Income with a household destination

The 2026 association interview reports 95% renewable heat and a DKK 3,134 annual price for its standard-house comparison. It connects price reductions to exceptional electricity-market income late in 2025 and into 2026. These figures are the published account's dated claims; weather, tariffs and dispatch economics can change. Their significance is that income from energy assets can reach customers through the price of their original service. [23]

A quieter kind of heroism

There is no need to invent a personal battle with regulators or attribute the whole investment programme to Rauhe. The sources support an operating leader who understands the equipment and can explain the economics in human terms. XPower's reading is that inversion needs such people for its entire life. The person who keeps it working may be as important to customers as the person who first proposed it.

2018	The heating company acquires three wind turbines, according to the operator interview.
2022	Higher surplus-power revenue supports a reported bill reduction.
February 2026	Rauhe describes the diversified system and its customer benefit.

Evidence boundary

Operator-reported energy sales and customer tariff benefit. The cited standard-house figure is dated and is not a guaranteed bill for every home. Rauhe's personal authorship of each investment has not been established.

Meet the operating team · Watch Rauhe at the project

07 / TELECOMMUNICATIONS TO ENERGY · JAPAN

Masayoshi Son

A crisis changed the boundary of the company

SoftBank founder and leader; sponsor of the Japanese SB Energy initiative and founder of the Renewable Energy Institute.

Masayoshi Son, 11 July 2008. Archival portrait extracted by the source uploader from an event photograph; predates the energy initiative. Masaru Kamikura / Wikimedia Commons · CC BY 2.0

> *“I am strongly convinced that renewable energy is our energy future”*
>
> Masayoshi Son, founder's message published by the Renewable Energy Institute. Undated page, reviewed September 2026. [25]

The motivation is on the record

Son's message to the Renewable Energy Institute explicitly connects its creation to the earthquake, tsunami and Fukushima nuclear accident of March 2011. It sets out his conviction that renewable energy should supply future generations and describes building support among public institutions, industry and civil society. The motivation is available in his own words; it does not require a reconstructed private moment. [25]

A statement acquired an operating company

SoftBank established the Japanese SB Energy in October 2011. Its 2023 corporate account describes the business as a response to the disaster, with solar and wind assets in Japan and a 50 MW wind project in Mongolia. The meaningful step for this collection is the commitment of organization and capital to production. [26]

Who actually delivered

Son supplied sponsorship and public advocacy. The subsidiary's managers and project teams supplied development and operations; the February 2023 disclosure names Shigeki Miwa as its representative director and CEO. Keeping these roles distinct prevents the familiar founder portrait from swallowing the organization that built the assets. [26]

After Fukushima, a business leader from outside the traditional electricity industry committed to building another supply option.

THE PROJECT / MASAYOSHI SON

The decision made visible

What the new activity contained

The Japanese company developed a renewable power business whose activities included generation, storage, electricity and heat sales, equipment operations and supply-demand adjustment. This was a commercial expansion out of a group associated with communications and technology into an industry on which such businesses depend. [26, 27]

An important ending to this chapter

On 28 April 2023, Toyota Tsusho completed the purchase of 85% of the Japanese SB Energy. The company was renamed Terras Energy; SoftBank retained 15% at that transaction. The announcement explicitly distinguishes the separate United States SB Energy business. A human account should include the ownership change, rather than freeze the company at its founding moment. [27]

What kind of rebellion the evidence supports

The record supports a crisis-driven challenge to the established direction of electricity supply, followed by operating assets and an eventual change of controlling owner. It also records cooperation with institutions and industry. For XPower, the useful example is a leader expanding the range of actions considered legitimate for his organization. The public sources used here do not disclose a transaction price or prove that energy profits exceeded the entire group's energy expenditure.

March 2011	Earthquake, tsunami and Fukushima accident reshape the energy debate.
October 2011	SoftBank establishes the Japanese SB Energy.
April 2023	Toyota Tsusho acquires 85%; the company becomes Terras Energy.

Evidence boundary

Historical energy-business diversification. Japanese and US entities are distinct. The reported capacity is dated and should not be equated with today's SoftBank-attributable capacity.

Read Son's own explanation · Read the completed transaction

08 / TELECOMMUNICATIONS AND FLEXIBILITY · FINLAND / ESTONIA

Jukka-Pekka Salmenkaita

The power plant already inside the network

AI and digital-services executive associated with Elisa's energy-storage development; Managing Director of Gridle in Elisa's May 2026 announcement.

“Gridle was originally developed for Elisa's own network”

Jukka-Pekka Salmenkaita, Elisa announcement, 28 May 2026. Apostrophe and hyphenation normalized. [30]

An unusual background for a power-business leader

Salmenkaita's conference biography places him in AI, network data and digital services. His team worked on the data platform for Elisa networks and AI-enabled products. This background makes the project distinctive: a capability developed to understand and control communications infrastructure became useful in managing electricity assets. His documented role is leadership of that development and commercial activity, without a claim that he alone invented it. [28, 29]

The asset was already doing something important

Mobile-network batteries protect communications when power fails. Elisa's virtual-power-plant account describes adding intelligent coordination so batteries can also participate in electricity balancing. It reports permission from Fingrid to use base-station batteries in Finland's balancing market. The engineering obligation is to preserve the original resilience function while opening a revenue function. [31]

From an internal need to another business

Salmenkaita's March 2025 analyst presentation sets out an operating model: optimize energy use, bring flexible capacity to markets and share revenues with customers. Its origin in telecom batteries is explicit. This is an inversion through control and market access, using stored energy and available capacity rather than assuming that a battery creates primary energy. [29]

Thousands of backup batteries gained a second job: helping the electricity system balance itself.

THE PROJECT / JUKKA-PEKKA SALMENKAITA

The decision made visible

What the project looks like

The physical equipment is distributed across mobile sites: batteries, power systems and communications connections. Software links them into a controllable portfolio. Elisa says batteries can charge when electricity is cheaper, supply the network or return electricity when appropriate, and help the wider system respond to imbalances. The company describes a 150 MWh programme; the cited page alone does not establish the fully commissioned total. [31]

A dated operating result

In May 2026, Elisa announced deployment across its Estonian mobile network. It described participation in upward and downward automatic frequency-restoration reserve, following signals from Elering. The announcement identifies electricity-market income and reduced energy costs as benefits. In March, Gridle had also announced new grid-scale optimization contracts totalling 22 MW / 44 MWh. Those contracts were at different project stages and must not all be labelled completed generation. [30, 32]

The human idea worth remembering

The opportunity was hidden inside an asset the organization already needed. A leader from network intelligence helped make a route from that operational necessity to an energy service. XPower's reading is that an inverter can change the commercial meaning of infrastructure by making it more useful. Cooperation with grid operators is central to this example: the new income comes from helping a shared system work.

Finland	Elisa gains balancing-market permission for base-station batteries.
March 2025	Salmenkaita presents the flexibility and revenue-sharing model.
May 2026	Elisa announces operating deployment in its Estonian network.

Evidence boundary

Commercial flexibility capability and reported market participation. Batteries store energy; they do not generate it. Revenue amounts and a consolidated positive net energy cash balance are not established by these announcements.

Official portrait and press material · Read his operating-model presentation

XPOWER / EDITORIAL READING

What these people have in common

The first asset is permission to act

These people occupied very different positions. Sladek organized citizens. Hermansen connected neighbours. Kurian and Colruyt could sponsor institutional decisions. Williams and Rauhe worked inside public-service operations. Son committed a corporate platform. Salmenkaita connected software and physical assets. Each story contains a person able to make another course of action possible. This comparison is XPower's interpretation of the profiles, rather than a claim that they followed one shared doctrine.

A surname opens the story; the team completes it

The memorable person helps us understand the decision. It is still necessary to name the cooperative members, board, technicians, financiers, contractors and successive managers. A useful Inverters profile should always ask who proposed the change, who authorized it, who designed it, who carried the operating risk and who received the benefit. Sometimes those are five different groups.

The opponent should be identified precisely

Schönau's history describes an incumbent utility and a contested concession. EBMUD documents professional scepticism about incoming wastes. Other cases establish a new activity or operating responsibility without establishing a personal conflict with an incumbent. Calling every project a war with the grid would erase the actual work. A human account gains strength when it can say exactly what was difficult.

The meter is only half the story

A reversed electricity flow is memorable. The full economic question asks who owns the output, who pays for it, what remains after operating and capital costs, and how value reaches the original service. The outcomes in this collection include a tariff benefit, a sales contract, a citizen-owned business, an asset sale and a flexibility service. They should retain their individual names.

What to copy

Look for an institution with a recurring energy burden, an overlooked productive resource and a person prepared to take responsibility. Give that person access to technical expertise and a clear economic boundary. Start with a test that can be measured. Preserve the quality of the original service. Document the first customer or settlement. Keep the operating team visible after the project becomes normal.

METHOD

Evidence and editorial boundaries

Research cut-off: 19 September 2026. This is a sourced editorial report, not a set of new interviews conducted by XPower. Direct quotations are short extracts from the linked originals. Translations are labelled. Reconstructed dialogue, private motives, invented personal opposition and composite portraits have been excluded.

Titles refer to the period identified in each profile. Historical announcements are treated as historical evidence. CIAL's FY2025/26 figures describe the later institution, with internal sales identified separately. The Hvide Sande figures describe published operating accounts and a standard-house comparison. No profile certifies the entire parent group's net energy profitability.

Two source discrepancies deserve preservation. Colruyt Group dates its first Halle turbine to 1999; Parkwind's retrospective says 1997. The profile follows the retailer's own chronology. Hvide Sande sources use different dates when summarizing construction and acquisition; this report attributes the 2018 purchase specifically to the METRO THERM operator interview and avoids assigning each investment to Rauhe personally.

Photographs are documentary images of identified people or places. Captions distinguish the subject from any project interpretation. Reproduced images carry their source and reuse credits. Where republication rights were not confirmed, the report links to the original portrait or interview instead of reproducing it. Inclusion implies no endorsement of XPower by the subject, photographer or organization.

The naming is intentional: Inversion describes the principle; Inverted collects organizations and projects; Inverters introduces the people who made the transition happen. Here Inverters is an editorial name for people, separate from the electronic device with the same word.

Companion collection

Inverted documents organizational precedents. Inverters asks whose initiative and operating work made those precedents possible. The two collections should be read together.

Explore Inversion on xpower.agency

REFERENCE / ORIGINAL PUBLICATIONS

Source register

01. **Goldman Environmental Prize**
2011 Prize: Q&A with Ursula Sladek
3 May 2011

02. **Goldman Environmental Prize**
Ursula Sladek: 2011 laureate profile
2011 profile

03. **EWS Schönau**
Die Geschichte der EWS
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04. **Indigenous Clean Energy**
Søren Hermansen: mentor biography
Undated

05. **Elizabeth Kolbert / The New Yorker**
The Island in the Wind
30 June 2008; 7 July issue

06. **Karl Sperling**
How does a pioneer community energy project succeed in practice?
2017; DOI 10.1016/j.rser.2016.12.116; abstract consulted

07. **European Commission / Clean energy for EU islands**
Municipality Schiermonnikoog visits Samsø Energy Academy
7 October 2021

08. **Manu Balachandran / Quartz**
Kerala, India has the world's first solar-powered airport
20 August 2015; quotation only

09. **Shevlin Sebastian**
V. J. Kurian: turning points in life
9 June 2021; journalist's interview retrospective

10. **CIAL Infrastructures**
Solar power projects
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11. **Cochin International Airport**
About CIAL
Company overview, reviewed September 2026

REFERENCE / ORIGINAL PUBLICATIONS

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12. **CIAL Infrastructures**
Annual report 2025/26
FY ended 31 March 2026; power sales and related parties

13. **Colruyt Group**
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14. **Parkwind**
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15. **Virya Energy**
Finalises sale of offshore wind activities to JERA
26 July 2023

16. **WindEurope / SolutionWind**
Interview with Jef Colruyt
27 November 2015; original video linked

17. **Parkwind / JERA / Virya**
Agreement for the acquisition of Parkwind
22 March 2023

18. **EBMUD**
Waste to power programme becomes blueprint
3 April 2012

19. **EBMUD**
Wastewater treatment
Utility operating description

20. **EBMUD**
Recycling water and energy
Utility resource-recovery description

21. **Port of Oakland**
Port to buy renewable energy from EBMUD
21 October 2022

22. **METRO THERM**
Hvide Sande has perhaps Denmark's cheapest district heating
Operator interview discussing 2022

REFERENCE / ORIGINAL PUBLICATIONS

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23. **Dansk Fjernvarme / Karen Grønning Mikkelsen**
Fjernvarmeselskab producerer 95 procent grøn fjernvarme
12 February 2026; interview with Morten Rauhe

24. **Hvide Sande Fjernvarme**
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Official operating-team page

25. **Renewable Energy Institute**
Mission and Masayoshi Son's founder's message
Undated

26. **SoftBank Group / Toyota Tsusho**
Toyota Tsusho to acquire 85% of SB Energy
9 February 2023

27. **Toyota Tsusho**
Completion of acquisition of 85% of SB Energy
28 April 2023

28. **FutureNet World**
Jukka-Pekka Salmenkaita: speaker biography
Undated; historical role description

29. **Elisa / Jukka-Pekka Salmenkaita**
Elisa Distributed Energy Storage
Analyst Event, 6 March 2025

30. **Elisa**
Elisa Estonia deploys Gridle optimization
28 May 2026

31. **Elisa**
Virtual power plant (DES)
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32. **Elisa**
Gridle signs three grid-scale optimization contracts
17 March 2026

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