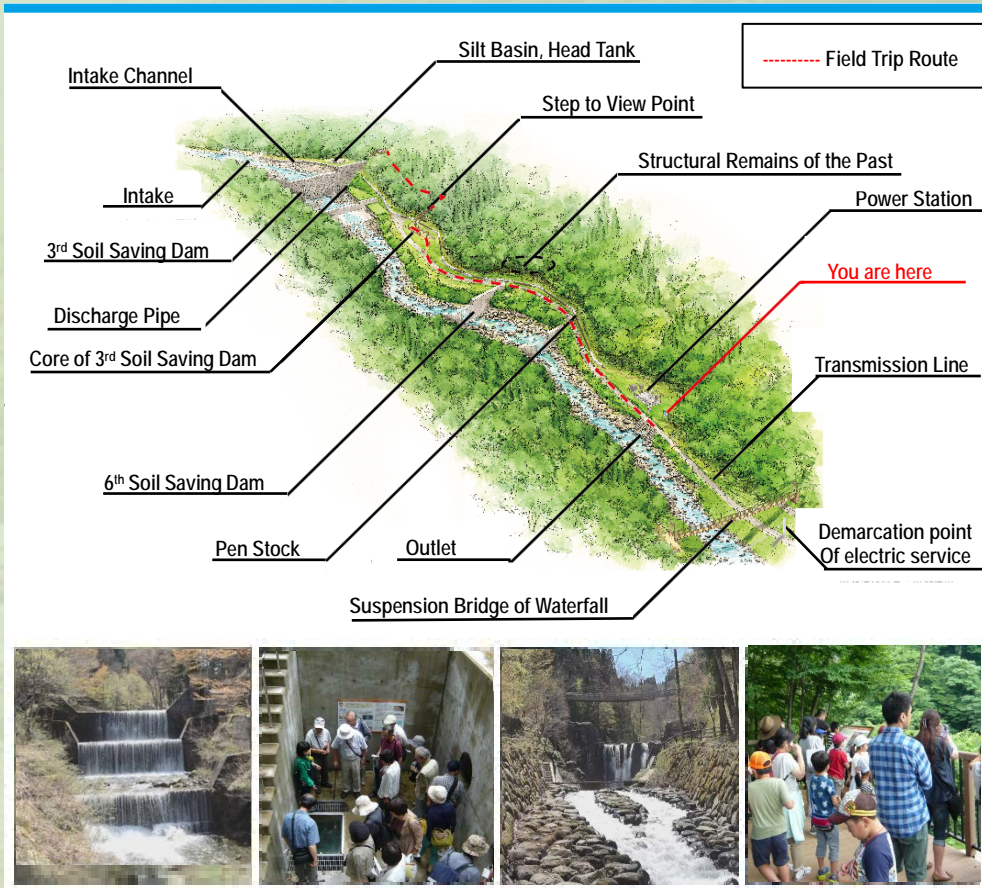


NEWJEC has ample experience in surveying, planning, designing, and construction



AWARD

For its contributions to community-building as well as practical benefits, the Tsuchiyu Onsen Higashi-karasugawa Hydroelectric Power Station was awarded the MLIT Minister's Award (in the 3rd Advanced Community-Building City Competition).



A small hydroelectric power generation project—part of community-building efforts for disaster reconstruction—in which the residents of the former town of Tsuchiyu Onsen in the city of Fukushima are the power producers.

- Maximum output: 140 kW
- Maximum water usage: 0.45 m³/s
- Effective head: 44.4 m
- Turbine type: Crossflow
- Completed in May 2015

We use a feed-in tariff for renewable energy to sell electricity, and use the profits to fund reconstruction and community-building in the area. Facilities in the vicinity include an observation deck, an information board, and a promenade, all built and installed as part of the effort to promote tourism. Many people visit to tour these facilities as well as the binary cycle power generation (from the heat from hot springs) facilities.

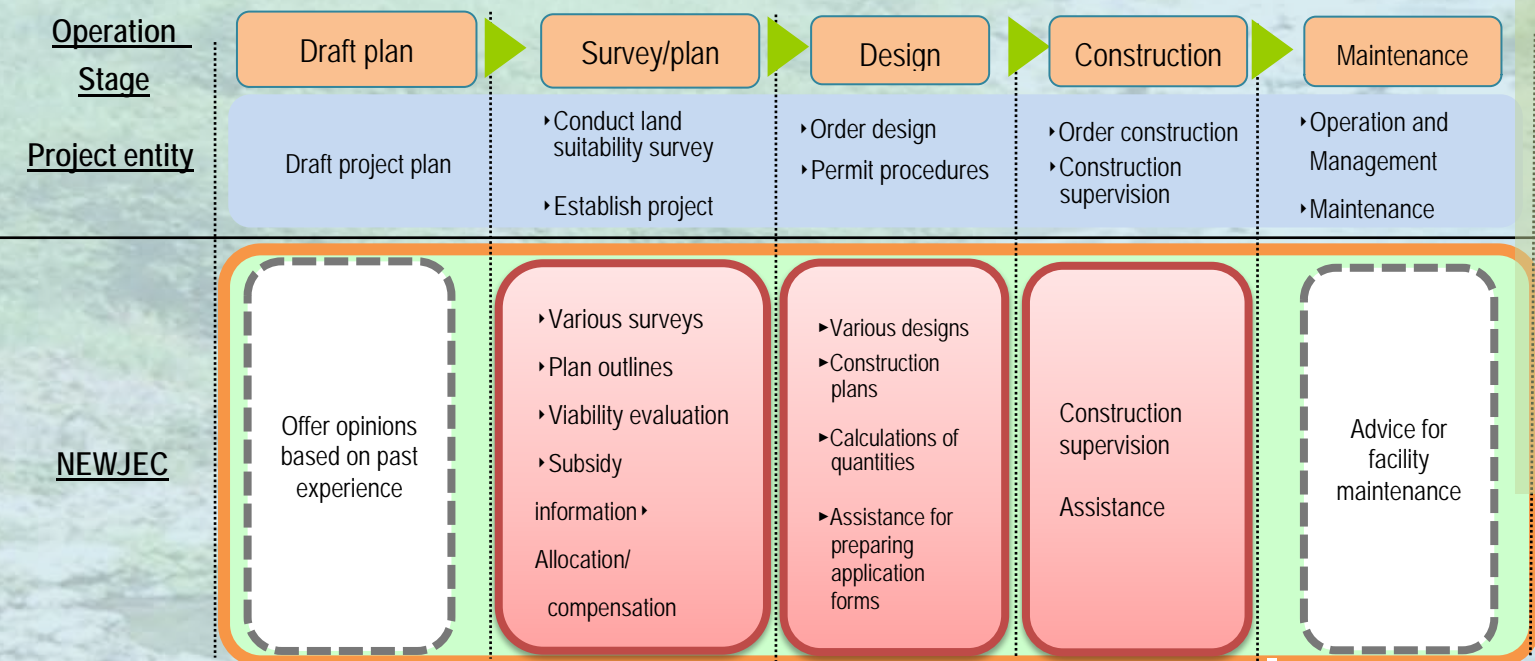
TREND

A growing number of small and medium-sized hydroelectric power generation systems are being introduced at existing facilities.

- Rivers
- Flood control dams, agricultural dams
- Ecological discharge from dams
- Forest conservation weirs/dams
- Agricultural channels
- Discharge from existing channels
- Water supply systems
- Industrial water

With a high enough discharge rate and head, small and medium-sized hydroelectric power generation may be feasible

We provide total support for building and updating hydroelectric power stations



Description of operations	NEWJEC's experience	Contract year	Contract area
<ul style="list-style-type: none"> ■ Outline/basic design 	<ul style="list-style-type: none"> • Outline design for the H small hydroelectric power project • Survey of available hydroelectric power from the small power station for H Dam • Examination of available hydroelectric power from the small power station at the control dam • Basic design for the work to update all facilities at A Power Station • Basic design at the I small hydroelectric power station 	2019 2019 2018	Kinki region Kyushu region Kanto region
<ul style="list-style-type: none"> ■ Implementation/detailed design 	<ul style="list-style-type: none"> • Basic/implementation design for the T Power Station • Detailed design for replacing the S Power Station • Survey and examination for repairing power generation facilities at the S Power Station • Implementation design for updating power generation facilities at the Z Dam • Implementation design for updating the T Power Station 	2020 2019 2019 2018 2018	Tohoku region Kanto region Chugoku region Tohoku region Hokuriku region
<ul style="list-style-type: none"> ■ Construction supervision 	<ul style="list-style-type: none"> • Supervision for the I Dam renewal project 	2018	Kyushu region
<ul style="list-style-type: none"> ■ Individual operations • PFI advisor • Allocation, compensation • Mass-haul curves for reservoirs • Dam rehabilitation • Bar arrangement design • Surfing • Technical assistance • Structural design 	<ul style="list-style-type: none"> • Consideration of introducing PFI for hydroelectric power facilities at the small power station for M Dam • Examination of water service operation at T Dam • Creation of permit application forms for changing water end-use categories at I Power Station • Consideration of revitalization for the O Dams • Equipment update and foundation bar arrangement design for the K Power Station • Assistance for water tank stability assessment at the I Power Station • Technical assistance through a feasibility study for the T Power Station • Project for assisting viability evaluation, etc. for hydroelectric power stations • Steel structure designs in existing incidental power stations 	2019 2019 2017 2019 2019 2019 2019 2017	Kyushu region Hokuriku region Kyushu region Kyushu region Hokuriku region Kinki region Kanto region Shikoku region Tokai region

Our ample experience underpins our support for introducing hydroelectric power generation to existing facilities

