

# Past Futures of Hydroelectricity. Swiss Dam Projects in Documentary Cinema

Jacqueline Maurer

## *Abstract*

The climate crisis obliges us to rethink landscape protection due to the need for renewable energy. Images and narratives of historic documentary films on the most important Swiss dam projects demonstrate that hydropower has always been a controversial endeavor in the Alpine republic. The films deal, in pro- or retrospect, with measures and discourses around the planning and construction of such infrastructures for expected futures. Four crucial moments in the Swiss context are covered: Karl Sauer explores the early Lake Sihl project commissioned by Swiss Federal Railways in the 1930s. Jean-Luc Godard documents in the 1950s the construction of the Grande Dixence dam to save Switzerland from electricity shortage. In the 1990s Peter Liechti entered the critical discourse of planned expansions of existing projects, whereas my photographs on site of Grande Dixence give insight into a communication programme to foster local tourism and to reach for acceptance for hydropower extension.

## Affiliation

Institute of Architecture, Eastern Switzerland University of Applied Sciences, Sankt Gallen

## Contacts:

jacqueline [dot] maurer [at] ost [dot] ch

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**1 - Swiss Federal Office of Energy (17.04.2024), *Bill on a secure electricity supply: Vote on 9 June 2024* [Online]. Available at: <https://www.bfe.admin.ch/bfe/en/home/supply/electricity-supply/federal-act-renewable-electricity-supply.html> [Accessed 26 June 2024].**

**2 - Swiss Federal Office of Energy (02.05.2024), *Hydropower* [Online]. Available at: <https://www.bfe.admin.ch/bfe/en/home/supply/renewable-energy/hydropower.html> [Accessed 26 June 2024]; Swiss Federal Office of Energy (02.05.2024), *Large-scale hydropower* [Online]. Available at: <https://www.bfe.admin.ch/bfe/en/home/supply/renewable-energy/hydropower/large-scale-hydropower.html> [Accessed 26 June 2024].**

### *Democracy versus electricity*

On 9 June 2024 Switzerland decided that the Federal Act on a Secure Electricity Supply from Renewable Energy Sources will come into force on 1 January 2025: “The bill [on a secure electricity supply] lays the foundations for a rapid expansion of Switzerland’s energy production from renewable sources such as hydropower, solar, wind and biomass. This will lessen the country’s dependence on energy imports and reduce the risk of critical supply situations. The bill includes funding instruments as well as new regulations for electricity production, transport, storage and consumption. It also introduces a mandatory hydropower reserve.”<sup>1</sup>

The Federal Act was subject to a popular vote as the referendum had been called. Organisations advocating for the protection of landscapes, as well as the right-wing Swiss People’s Party, were against it. They argued differently in a highly complex historical and political challenge, which must face the dilemmas of the contemporary energy and climate crisis.

### *The significance of hydropower in Switzerland*

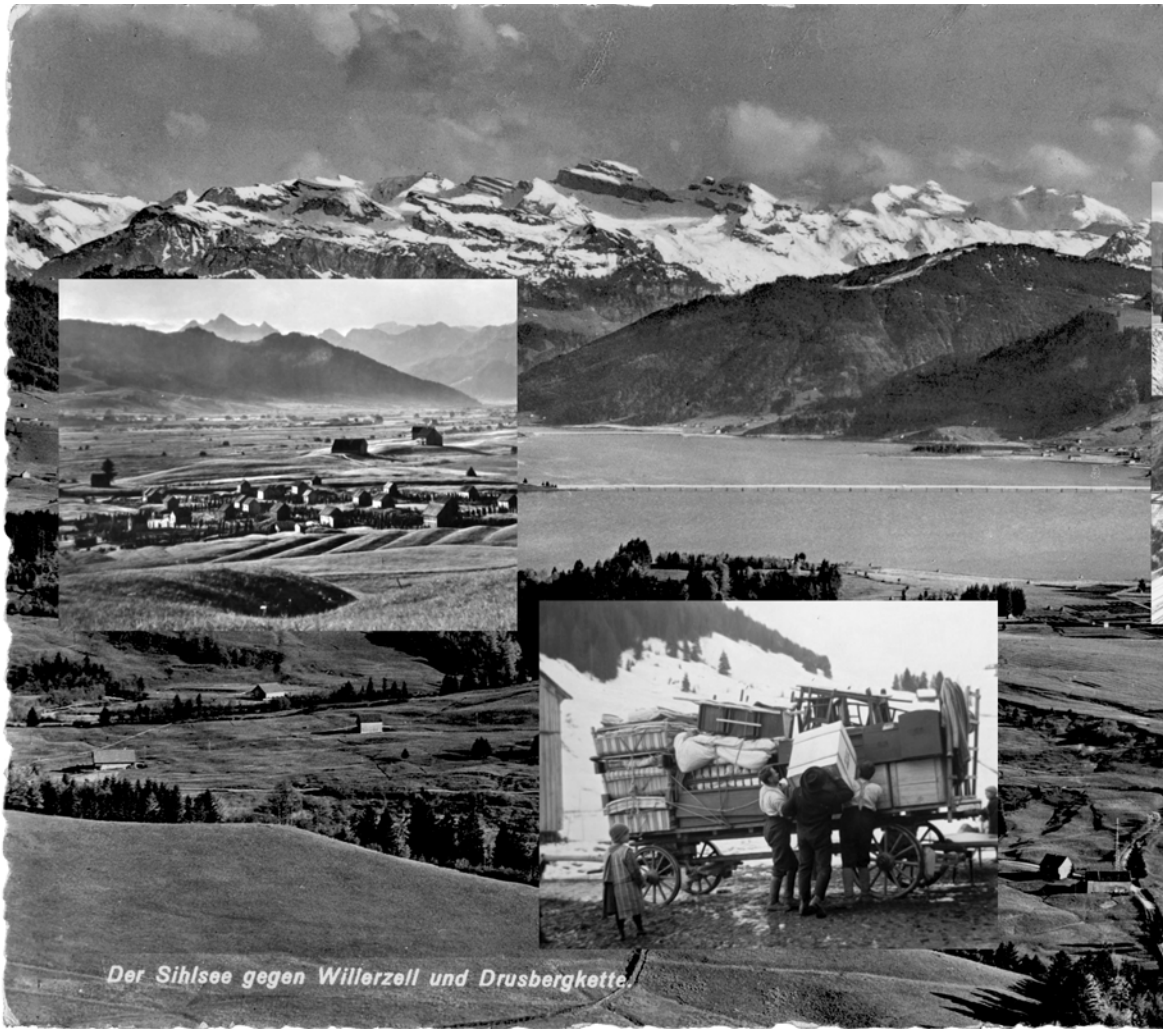
One of the aspects within the Federal Act regards the expansion of existing hydropower stations and the construction of new ones. Switzerland’s topography and the significant precipitation amounts are ideal conditions for hydropower. Four types of power plants can be distinguished: run-of-river power plants, storage power plants, pumped storage power plants, and pure circulation power plants. Planning and construction of such infrastructures started already at the end of the nineteenth century. The most important phase was between 1945 and 1970 when a high number of run-of-river power plants were built in the lowlands as well as several dams in the Alps. At the beginning of the 1970s, almost 90% of the national electricity production derived from hydropower. This number diminished to around 60% in 1985, with the introduction of nuclear plants. Today, hydropower still plays a significant role in Swiss energy production, with a share of around 58%.<sup>2</sup>

### *Storage power plants as cinematographic subjects*

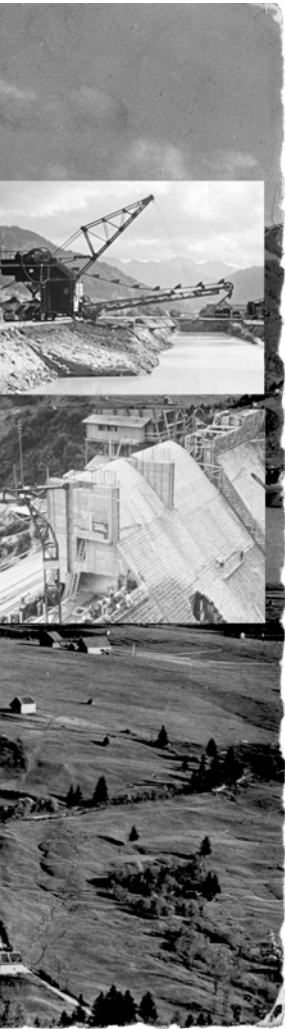
Storage power plants with artificial lakes held back by dams are not only the biggest hydropower infrastructural projects in terms of planning, construction, and labour. They also imply the major impact on the surrounding ecosystem and often on the local population too, especially when their villages were flooded. The huge building projects created energy landscapes that attracted the interest of filmmakers: Jean-Luc Godard saw the possibility to create his debut in the style of modernist films of the interwar and postwar period that were meant to celebrate progress. The experimental filmmaker Peter Liechti and the documentary filmmaker Karl Saurer, instead, created critical contributions by involving locals and experts.

*From edited moving images to collaged still images*

The backdrop images that serve as the background for each of the three collages that are displayed here are related to the mediation of the energy landscape associated with the three dam projects. While the Lakes Sihl and Grimsel are depicted on historical postcards, we are invited to visit one of today's Grande Dixence dam's caves, which has been used to screen an adapted version of Godard's original work. The chosen film stills either contrast sharply to stand out or blend in with the space created by the background image. The stills can be understood as a literal zoom into the corresponding energy landscape, or they present key scenes from the movies that depict the building process and its stages of completion, critical oral accounts about it, or images of an information film, based on historical documentation, in the case of Grande Dixence. The following paragraphs are dedicated to each of the three selected films and discuss how they appropriate and reflect the related dam project by narration and cinematographic means.



Karl Sauer's (1943-2020) documentary film "The Dream of the Big Blue Water" from the beginning of the 1990s focuses on the human fates associated with the Lake Sihl dam project, realised in the 1930s. It served as part of the expansion of the state's energy policy and the Swiss Federal Railways. By interviewing various people affected and witnesses who were still alive and reenacting local council meetings orally, the filmmaker provides an insight into the highly problematic political measures that had a massive impact on cultural landscapes and their inhabitants. They were forced to abandon their farms and were either given land that needed to be improved upon or they emigrated to the United States and worked laboriously to establish themselves anew. Etzelwerk's planning



*Lake Sihl: "Der Traum vom grossen blauen Wasser" (Karl Saurer, CH 1993)*

started at the end of the nineteenth century. It is situated close to Einsiedeln, a well-known pilgrimage place. A monastery monk was even inspired to make a proposal, which would have also flooded his nearby village of origin. "Fellow citizens, let us not lag behind, let us in our remote mountain valley also participate in the general competition of the spiritual and physical forces of the gigantic progress and achievements of mankind. The electric spark ignites powerfully into the new century," a politician is quoted in the movie, demonstrating the people's tangible belief in and pressure for the pathos of progress.

**Fig. 1 - Lake Sihl**  
Film stills from Karl Saurers "Der Traum vom grossen blauen Wasser" (CH 1993) on historic postcard "Der Sihlsee gegen Willerzell und Drusbergkette", photographed by Jean Gaberell (undated, before 1 June 1941). Processed by the author, with materials courteously provided by Karl Saurer Filmproduktion, Elena M. Fischli, Nachlass Karl Saurer, RECK Filmproduktion; ETH-Bibliothek-Zürich, Bildarchiv (PK\_006242).



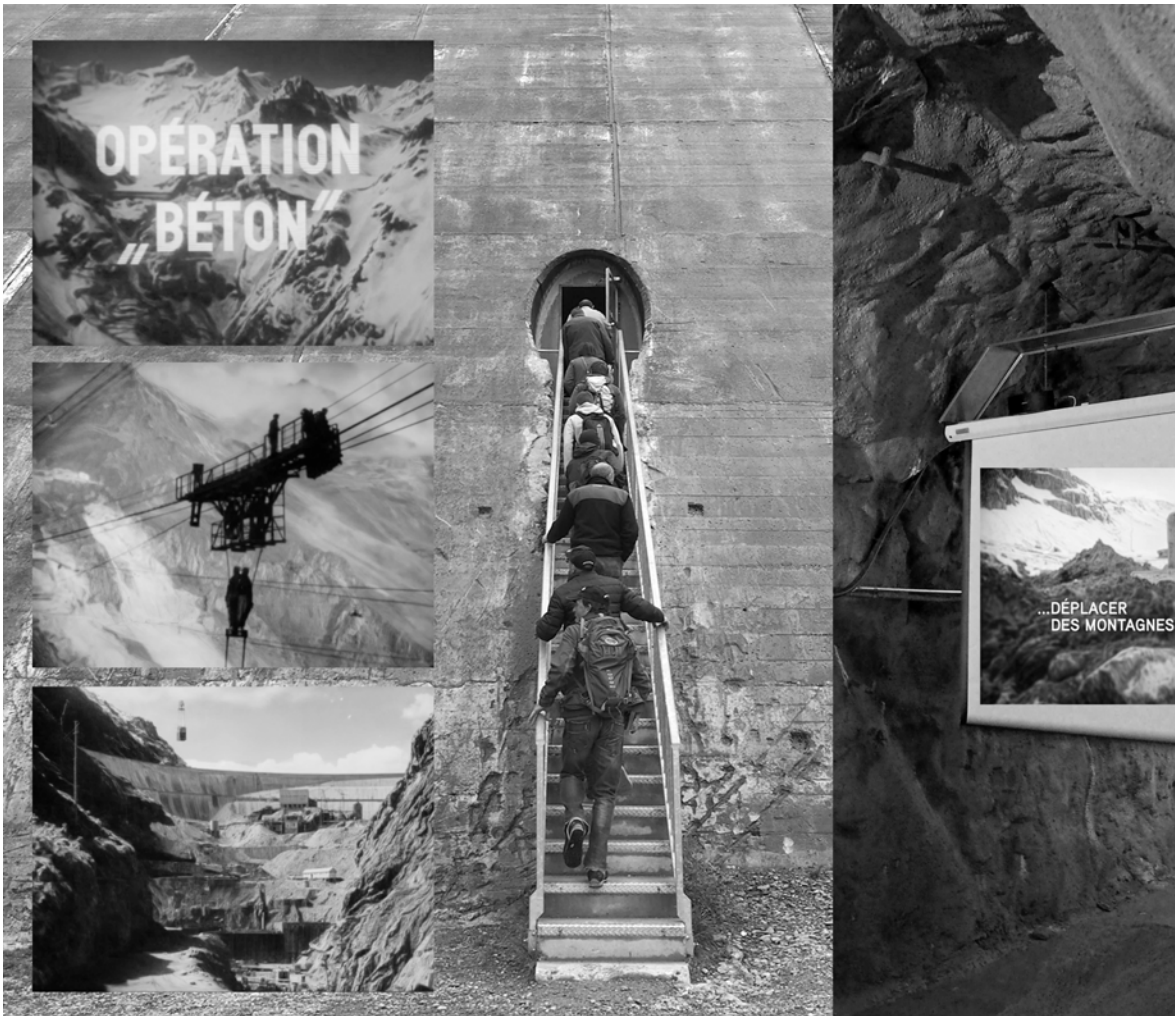
With *Grimsel*, which is rhythmized by experimental image and sound recordings, Peter Liechti (1951-2014) audiovisually explores the scenic surroundings of the Seeuferegg gravity dam, which was completed in 1932. It keeps back Lake Grimsel in the Bernese Oberland. The images are accompanied by the speeches of commentators who are not specified – for example by indicating the names and personal or professional relations to the location. They criticise the planned expansion to Grimsel West by Kraftwerke Oberhasli AG (KWO) since the 1980s, which is also depicted in the film. The philosophical thoughts on socio-political and ethical aspects of human intervention in natural and cultural landscapes described by these people at the time can also be found in today's discourse: "If they will build, what shall we do? The last unspoilt landscapes destroyed, all the water trapped... Emigrate? Like they used to? As some kind of



*Lake Grimsel: "Grimsel" (Peter Liechti, CH 1990)*

economic refugees, because of too much economic wealth, not too little? That's the new paradox. It is an interesting process that's occurring today. We are creating more and more artificial nature for ourselves [...]. And to build and run all this artificial nature, we have to curb and destroy more and more genuine nature. That is an interesting process." The expansion project Grimsel West was finally suspended at the end of the 1990s due to strong opposition. Maybe Liechti's documentary might have contributed to this outcome. However, within the contemporary context of the growing need of renewable energy, construction of the Spitalamm gravity dam has begun in 2019 to replace the first dam. The project was even driven forward at the federal level by the so-called "Grimsel paragraph" (2022) and should be completed in 2025.

Fig. 2 - Grimsel  
Film stills from Peter Liechti's "Grimsel" (CH 1990) on historic postcard "Grimselsee gegen Finsteraarhorn" photographed by Emanuel Gyger (ca. 1940). Processed by the author, with materials courteously provided by Liechti Filmproduktion, Look Now!, Rec Film, absolut MEDIEN; ETH-Bibliothek-Zürich, Bildarchiv (PK\_000601).



In his debut film, the short documentary “Opération ‘Béton’”, Jean-Luc Godard (1930-2022) follows the production and processing of concrete used in the Grande Dixence dam’s construction. The project was designed to be the most efficient way to counter the anticipated power shortfall in the nation, and it produced Switzerland’s largest construction site in the post-war era. As an employee at Grande Dixence SA, Godard used the resources of many assistants, his understanding of the location, and the construction site’s infrastructures to create his debut film. “Opération ‘Béton’” chronologically traces the manufacture of concrete on the numerous construction sites and documents the infrastructures required for this. They in turn served to realize his film, which was literally grafted onto them. After he finished his work, the 24-year-old director was able to sell it to the company Grande Dixence SA by using the affirmative approach of commissioned industrial films. He proved his authorship by





*Lac de Dix: “Opération ‘Béton”  
(Jean-Luc Godard, CH 1955) & the  
mediation of hydropower*

working entirely on his own initiative and therefore did not have to obey any corporation directives typical for commissioned films.

A revised and updated version of “Opération ‘Béton”” by the Lausanne based “identity company” essencedesign SA has been on display for the general public on dam tours since 2006. This is a component of the hydropower communication strategy that has been grafted into the energy landscape. The movie is thus projected in the same location it was shot – in a cavern within the dam, nestled between the dam wall and the surrounding natural rock. Its career was left open by the filmmaker, who went on to make his own career. Strangely, “Opération ‘Béton”” is arguably the most often screened Godard film today. This is solely to support and legitimize hydropower, which has drawn harsh criticism from environmental groups on numerous occasions.

Fig. 3 - Grande Dixence  
Film stills from  
Jean-Luc Godard’s  
“Opération ‘Béton”  
(CH 1955) and “Film  
historique – J.-L.  
Godard” (CH 2006)  
combined with two  
photographs by  
Jacqueline Maurer  
(2015).

Processed by the au-  
thor, with materials  
courteously provided  
by ACTUA FILMS SA,  
essencedesign SA;  
Jacqueline Maurer.

*Three audiovisual discursive contributions, three different approaches*  
Jean-Luc Godard's short film "Opération 'Béton'" combines two aims: Godard's interest to produce his first film motivated by the audio-visually highly fascinating production and processing of concrete and his idea to sell his work to Grande Dixence SA to make a living and to start his film career. The young filmmaker benefitted from the knowledge of the site by his colleague Jean-Pierre Laubscher and engaged with Adrien Porchet a former war-film photographer who knew how to shoot on a complicated terrain. He recorded direct-sound, edited in a Geneva based film studio, provided an audio-comment and stressed the sublime site and undertaking by Händel's and Bach's baroque music.

Karl Sauer created "Der Traum vom grossen blauen Wasser", a critical historic documentary about an energy landscape near his hometown Einsiedeln. In his spirit of reflecting power structures and giving voice to "simple women and men," he integrated oral history accounts by victims of the Lake Sihl project, as families lost their land when they had to move away. The film is also a research project which combines historic photographs and film documents with statements from historic council meetings leading to the project. Further, it involves experts, reconstructs digitally different proposals for the project, and comments on their potential consequences for the existing landscape.

Peter Liechti's "Grimsel" was originally conceived as an expression of opposition against the expansion of the two existing dams in Hasli Valley. The middle-length film tries to trace the intuitive skepticism against such plans. Liechti's camera explores different locations in the area, combines the filmed landscapes with text, drawings, and graphs from information brochures, and accompanies a few people with different backgrounds and explicit critical opinions about the expansion project: a housewife, a sculptor, a mountain guide, and a botanist. "Grimsel" is a fascinating experimental audiovisual approach to the meeting points of the natural and technological sublime, using at times uncanny blue filters, and combining the expressive images with the realities and down-to-earth attitudes of people who would not be seen and heard otherwise.

### *Histories of contemporary challenges*

The three collages are visual statements inspired by three important historical films that describe three of the largest dam constructions in Switzerland and how postcards and local communication concepts have been used to mediate the related energy landscapes. The selected writings and images contextualize and convey significant events and conversations in the history of the contentious development, building, and extension of storage power plants in Switzerland. This happens right within the heated contemporary societal and political debate which needs to find a compromise between landscape projection and the provision of national infrastructures for renewable energy production within the global climate and energy crisis.

### *Acknowledgements*

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