

CASE STUDY

BC Hydro Leverages GIS Data in an Esri Environment with EpochSync

PROJECT SUMMARY

Project:

Data migration and synchronization with “set it and forget” operation

Location:

British Columbia

Number of Customers:

5 Million +

Applications:

Moved to EpochSync Pro in 2023 to ensure long-term compatibility with Esri

Solution Implemented:

Epoch Sync Pro

Customer Benefits:

- Improved situational awareness
- Simple, cost-effective solution
- Ease of use and efficiency

INTRODUCTION

BC Hydro is a provincial Crown corporation, owned by the government and people of British Columbia, Canada. For BC Hydro, generating and delivering electricity to 95% of the population of British Columbia, Canada involves 30 hydroelectric plants and a network of more than 80,000 kilometers of power lines that transport power across a varied terrain. Ensuring reliable service to more than 5 million customers in this demanding environment requires ready access to robust GIS data. Since the utility’s GIS information for transmission and distribution resided in GE Smallworld, the organization was limited in the tools it could use to work with that data effectively.

This case study outlines how Epoch Solutions Group was able to provide their GIS data migration software, EpochSync, that allowed BC Hydro to fully synchronize their data between Smallworld Version Managed Data Stores and Esri ArcGIS Enterprise Geodatabases. BC Hydro implemented EpochSync Classic in 2020, which involved an initial full synchronization of the data between Smallworld and Esri. Once implemented, the solution only needs to perform periodic data synchronizations, ensuring just the incremental data changes are synced. When BC Hydro learned that the Esri desktop version would be sunsetted, the time was right to migrate to the new EpochSync Pro version.



THE CHALLENGE

Limited Ability to Work with GIS Data

"Other business groups in the company, like our power generation group, were using Esri for GIS data," noted IT Advisor Evan Schwab. "While we currently have two GIS systems, we're looking to develop new capabilities on the Esri platform going forward."

Two factors provided a strong impetus for getting BC Hydro's GIS data accessible on Esri:

- **In the short term**, the utility wanted to move to a web-based, map-based application for managing its many environmental documents, with reference layers for the transmission and distribution functions. "Because we were going with a web-based application for our new environmental solution, we had to have the data in an Esri format," Schwab said.
- **Long term**, BC Hydro saw more and more applications eventually moving to Esri. As the organization rolled out other Esri-based solutions, including an emergency operations dashboard and a streetlight management system, the utility envisioned achieving significant benefits from gaining an enterprise view of its transmission and distribution data in an Esri format.

For these reasons, BC Hydro needed the ability to sync its GIS data between GE Smallworld and Esri but lacked a solution to make this task easy and efficient.



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THE SOLUTION

MIGRATE GE SMALLWORLD DATA TO ESRI WITH EPOCHSYNC

The EpochSync GIS data migration software from Epoch Solutions Group proved the right answer. EpochSync provides a powerful, flexible, high-performance solution for synchronizing data between Smallworld Version Managed Data Stores and Esri ArcGIS Enterprise Geodatabases. It's also scalable to any-sized enterprise, enabling even the largest utilities and telecommunications providers to seamlessly migrate Smallworld data to an Esri geodatabase.

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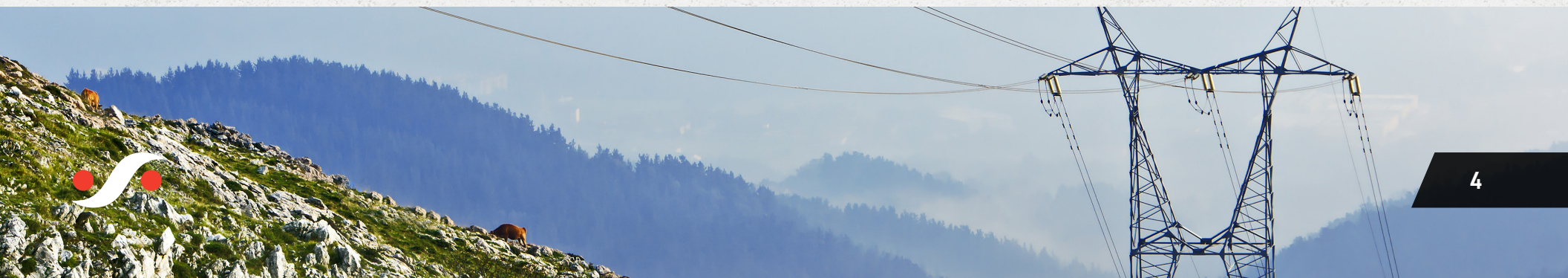
"We needed to be sure we could continue to use this product long term, staying ahead of any software compatibility issues," Schwab explained. EpochSync Pro is written in the ArcGIS Pro SDK to capitalize on the Esri Utility Network, enabling organizations to bring GE Smallworld data into an ArcGIS format and leverage all the advantages of the ArcGIS functionality. EpochSync Pro also provides flexible mappings that support data syncing between different data models, and staff can create mappings to extract data with minimal training.

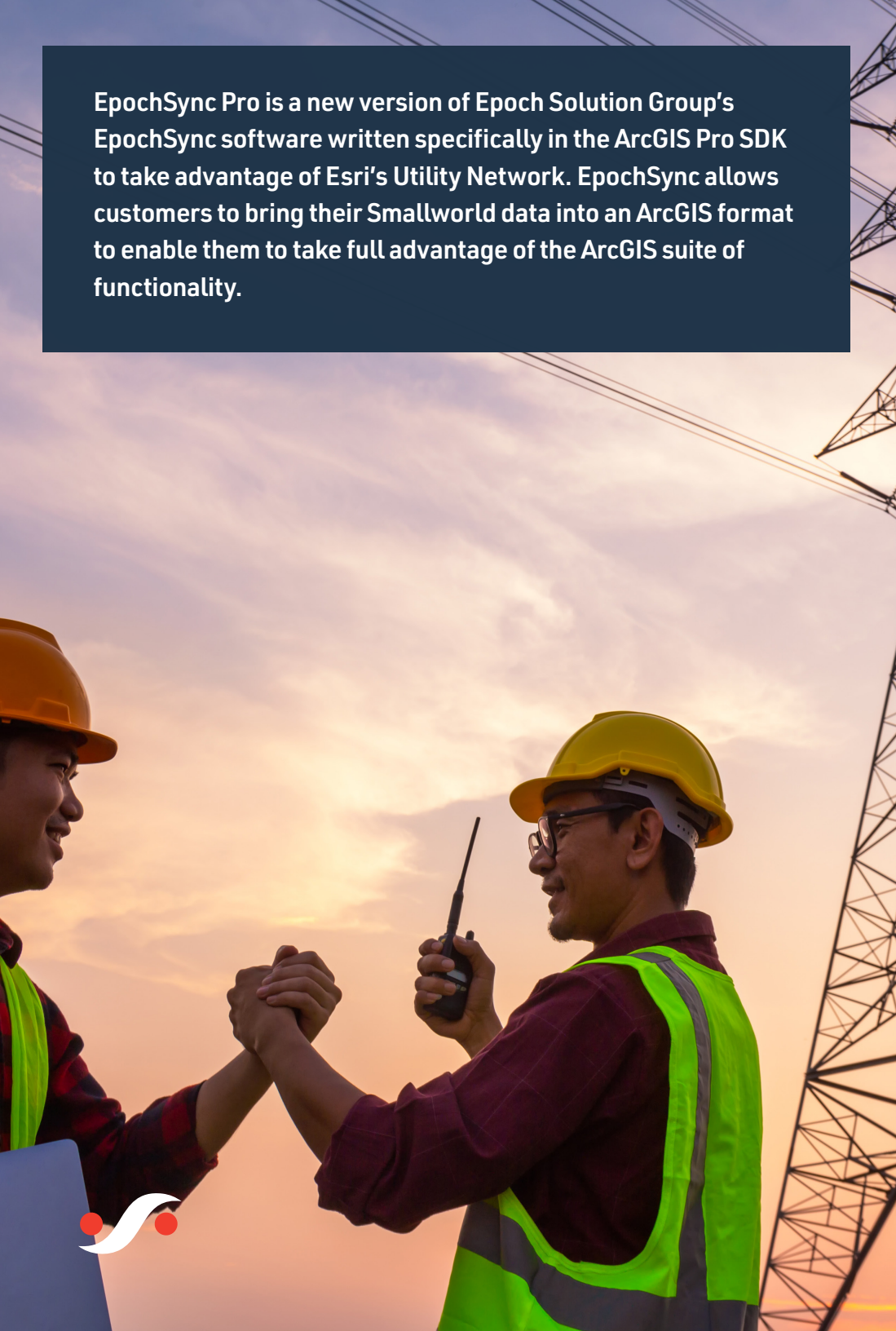
BC Hydro completed the migration from EpochSync Classic to Pro in early 2023. With many other IT projects happening at the same time, the organization appreciated Epoch's flexibility in adapting the migration project plan and schedule.



"We were doing other upgrades to the Esri environment at the same time, fitting in the EpochSync Pro implementation between those projects. Epoch was very adaptable to the situation and coordinated well with our development, testing, and production teams."

- EVAN SCHWAB, IT ADVISOR





EpochSync Pro is a new version of Epoch Solution Group's EpochSync software written specifically in the ArcGIS Pro SDK to take advantage of Esri's Utility Network. EpochSync allows customers to bring their Smallworld data into an ArcGIS format to enable them to take full advantage of the ArcGIS suite of functionality.

THE RESULTS

Simple Synchronization, Better Access

Schwab describes EpochSync as "a simple tool that works great," specifically citing its ease of use. "The phrase we use is 'set it and forget it.' We set up an interface and now it just runs every night and does what it's supposed to do."

BC Hydro also has found EpochSync simple to configure and maintain. "We don't need to engage Epoch every time we need to change a data model," he added. Instead, an in-house resource easily makes any required changes.

With EpochSync enabling seamless migration of GE Smallworld data to the Esri environment, the utility has gained powerful advantages.

"We're leveraging 'no-code tools' like ArcGIS Story Maps to develop planning for maps for distribution," Schwab said, eliminating the need for planners to rely on PDFs and essentially start from scratch anytime they needed to create a map. BC Hydro's planning maps communicate key details to senior leaders and the Distribution Engineering and Design group, such as low capacity issues and upcoming system improvement work.

EpochSync also enables the utility to embed maps into off-the-shelf tools like Collector, Field Maps, and SAP Service and Asset Manager, providing its field personnel with the up-to-date information they need to complete their work effectively.

"We're leveraging a number of software developer kits for Esri to embed maps in web applications for street light management, customer connection requests, and environmental study tracking," Schwab said. And with EpochSync in place, BC Hydro can share GIS data with external groups—like Emergency Operations BC—to ensure everyone has much-needed situational awareness when major events occur.



To learn more or schedule a demo,
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