

A large portion of development work is focused on change; change in **context**, change in **operations**, change in **behaviour**.

These changes don't happen overnight, and in some cases, it can take a while to see results. But even small, incremental adjustments can be important early signs that positive change is happening.

In this series called "Stories of Change," we share some examples of early indicators of change.

What happened?

UKNIAF started a partnership between the Transmission Company of Nigeria (TCN) and the Nigerian Meteorological Agency (NiMet). This partnership aims to make the grid smarter by sharing weather forecast data. NiMet will provide TCN with information about changing weather conditions, enabling TCN to better manage the generation and distribution of hydropower, optimizing the use of hydropower resources and improve the efficiency of the grid.

Why does it matter?

In the past, weather forecasts were not used to plan the scheduling and dispatch of hydro power plants in Nigeria. This led to suboptimal utilization of hydropower, especially during the rainy season, resulting in energy waste. This inefficiency affected the cost effectiveness of power production and the reliability of the grid.

Thanks to this partnership TCN now has access to real-time weather forecast data. This allows them to consider the impact of changing rainfall patterns on electricity generation and supply. The collaboration between the transmission and meteorological agencies is a step towards a greener and more resilient electric power grid in Nigeria. It promotes the use of hydropower instead of thermal power, reducing carbon emissions. Additionally, the data on water velocity and volumes will help improve the management of water resources for ecological purposes.

Furthermore, the collaboration also enhances TCN's planning capacity for solar power. Weather forecasts will be used to assess the potential for solar power generation. This comprehensive approach to utilizing weather information contributes to a more sustainable and efficient energy sector in Nigeria.

Who benefits?

By incorporating weather forecasts into their scheduling, TCN's National Control Centre (NCC) can enhance the effectiveness of their operations. This improved planning for hydro and solar power leads to a more stable grid overall. As a result, TCN's commercial performance will also benefit from increased reliability and efficiency in the national grid.

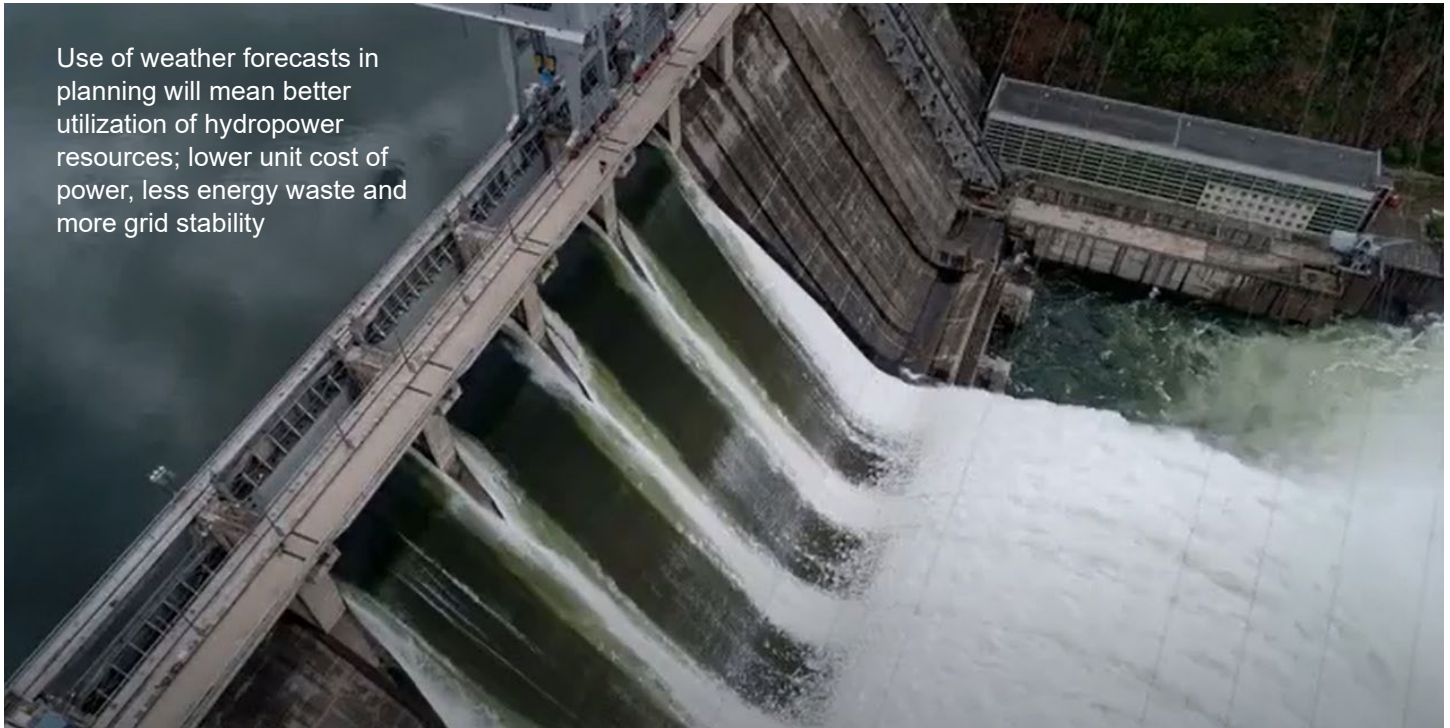
Hydropower systems are known for their resilience, which means that incidents of grid disturbances will be minimized. This translates to a more stable power supply for industries and households throughout the country. Optimal utilization of hydropower resources will contribute to lowering the unit cost of power, reducing energy waste, and enhancing grid stability. Ultimately, this means improved access to electricity for those who were previously unserved, underserved, or left without access to reliable electricity.

What did UKNIAF do that made the difference?

UKNIAF recognized the importance of integrating weather forecasts into power generation scheduling. We proposed a partnership between TCN and NiMet to achieve this goal. As part of our recommendations, we emphasized the inclusion of weather data in hydro scheduling software to improve dispatch procedures. These suggestions were incorporated into TCN's NCC revised operational procedures. With the facilitation of UKNIAF, TCN and NiMet collaborated and agreed on the initial modalities of the partnership. Both agencies have appointed focal persons to manage this relationship.

UKNIAF played a crucial role in proposing and facilitating this institutional partnership. As the sole Technical Assistance facility supporting TCN's National Control Centre, our support has helped to enhance the understanding of the benefits associated with incorporating weather data into scheduling, leading to institutional change.

Additionally, UKNIAF is providing assistance in procuring a hydro scheduling software for implementation at the NCC.



What lessons can we draw from this?

Change occurs at both a high level, and in day-to-day operations:

- 1 Nigeria's low carbon transition will require a combination of big policy actions as well as a series of smaller, institutional changes which are equally transformational as drivers of change. It is important to identify and track change at both levels.

The instruments for change are often readily available:

- 2 The process for initiating this change was establishing a relationship between two existing institutions. There was no need to build new capacity to gather weather data.

Change can occur through small, relatively low-cost actions:

- 3 We often focus on bigger issues and sometimes change can be implemented through relatively simple processes. We can implement smaller, low-cost actions that can bring about larger significant change through regular use.

Scan or click to watch the "Integrating weather forecasts" Story of Change video

