Screening Tool for Energy Evaluation of Projects (STEEP)

A reference guide for assessing water supply and wastewater treatment systems

ADB e-Marketplace
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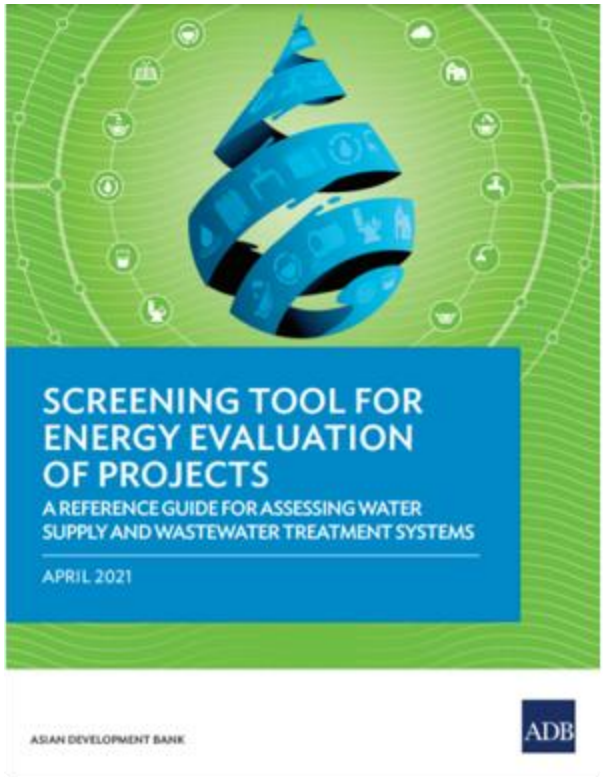
Stephane Bessadi
Sr Procurement Specialist
PPFD

Rodney Chapin
CEO/Founder
Ardurra International PTE LTD

Launch of STEEP Publication & Tool



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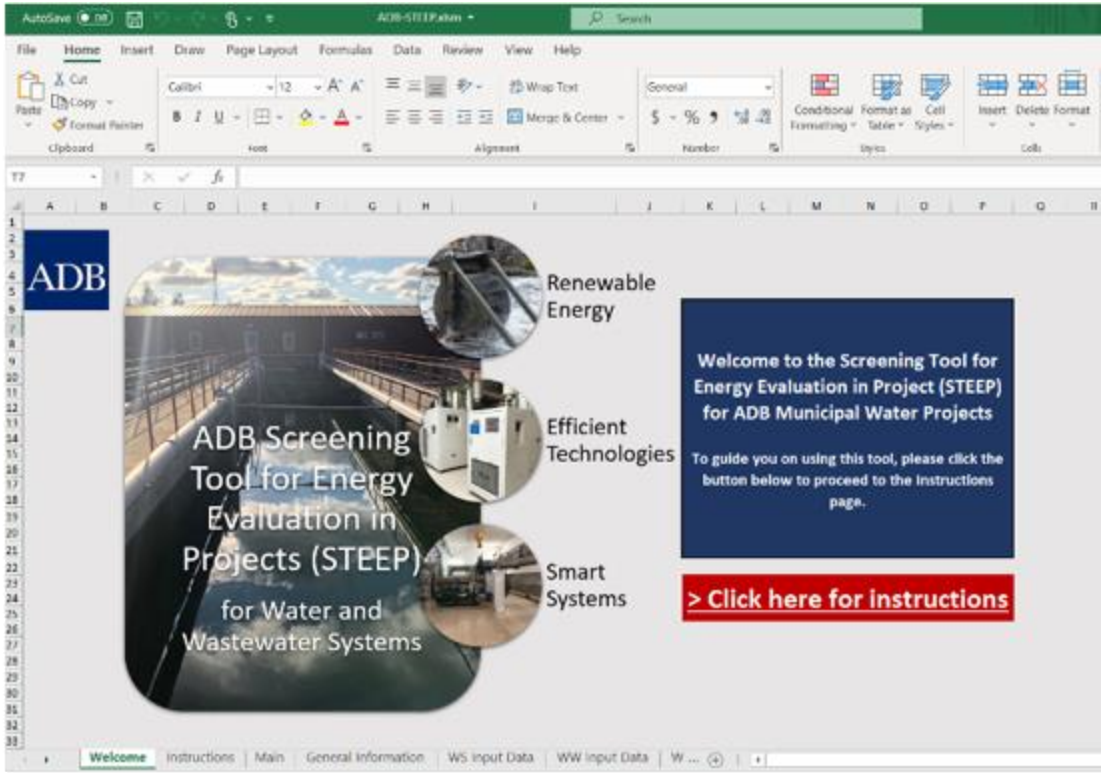


Potential of Energy reduction impact

In ADB's DMCs :

Total energy use of existing water and wastewater systems > 90 billion kilowatt-hours (kWh), and more than 64 million tons of carbon dioxide (CO_2) / Y

The recorded CO_2 is approximately 1% of global emissions.

Implementing the recommendations from STEEP=

- Save 36 billion kWh of energy or more than 25 million tons of CO_2 emissions per year

- Save >$2.5 billion.

- Reduce by 0.5% the total CO_2 emissions from these countries

- The production of drinking water in the world : 1% of the electricity consumed on the planet.

= **Australia's electricity consumption or half that of France**

- Water leaks : a waste of energy in the world. This unnecessary production of drinking water also emits 55 million tons of CO 2 equivalent, i.e. close to 0.15 % of global emissions.

Usual focus on WSS service levels, but what about energy efficiency?

Potable Water Supply: 0.52 kWh/m^3
Transport, Treatment and Distribution

Wastewater: 0.54 kWh/m^3
Collection, Treatment and Disposal

Operating costs ($/kWh)

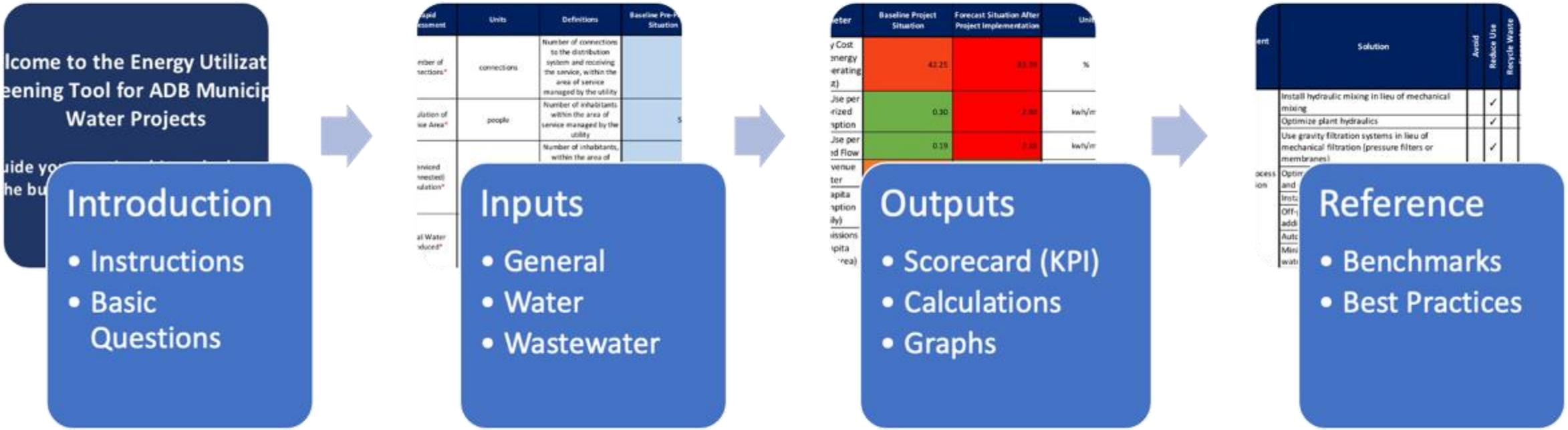
CAPEX (oversized or overloaded equipment)

Load on power grid

GHG emissions

Screening Tool for Energy Evaluation of Projects (STEEP)

Excel® based tool for performing a rapid assessment of energy use for planned water sector investments



Example Results – Water Supply System (brownfield)

Background:

- The Tool was used to compare the existing 2 systems to the proposed (upgraded) system, and detailed projections were made for alternative scenarios

STEEP Results:

- The Tool indicated significant increases in energy use for the upgraded systems due to excessive focus on continuous, reliable supply at the expense of energy use