



Small Hydroelectric
renewable power generation



NLINE ENERGY™

EESI: *“A New Look at Opportunities for America’s First
Renewable Energy Resource”*

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The Enlightenment of Small Hydro

• First Renaissance

- 1848 – James Francis invents Francis reaction turbine
- 1870 – Lester Allen Pelton invents impulse Pelton wheel
- 1882 – Schoellkopf Power Station No. 1, Niagara Falls, NY

• Second Renaissance

- 1900-1960's – Bulk of global development

• Third Renaissance

- 1978-1986 – FERC PURPA and Qualifying Facilities (QF)

• Fourth Renaissance

- 2009 – Present – RPS, Feed-in-Tariff, HREA, AWIA

• Fifth Renaissance?

- Novel upstream and downstream fish passage
- Fish-friendly turbine technologies
- New environmentally-sensitive designs at dams and rivers
- Corporate interest in renewable and clean projects

Experimental Hydro



Major Hydro: 30-1500 MW Grand Coulee



Mid-size Hydro: 5-30 MW



Small Hydro: 5 MW (<1MW)

In-Conduit Hydro



New, Modular Technologies

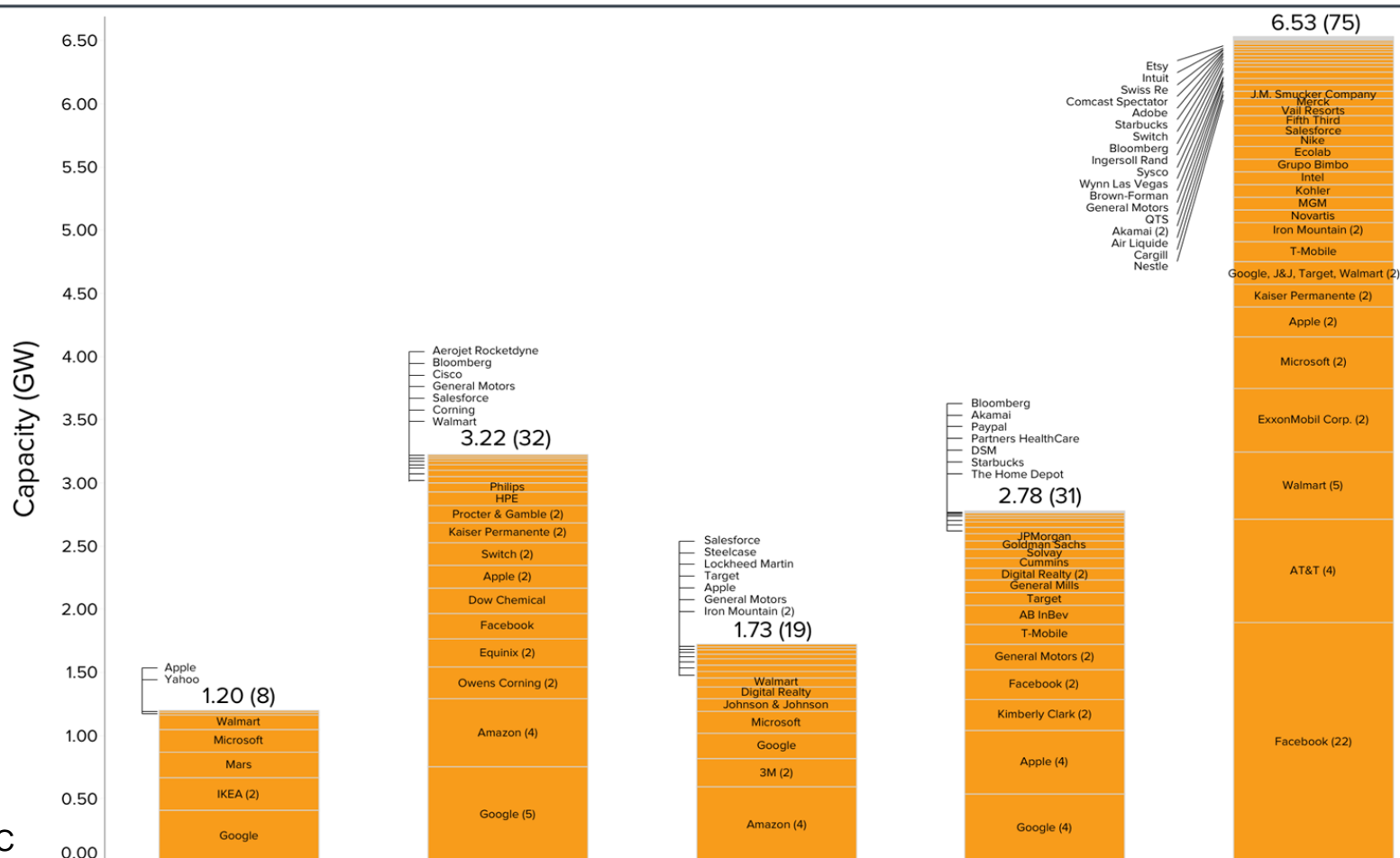


Source: AmJet, Obermeyer, NEHC, Natel

Corporate Appetite for Renewables



Corporate Renewable Deals 2014 – 2018



Thank You!





EVERY DROP OF ENERGY®

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