North American Distribution Automation Market Assessment & Outlook 2015-2017

Final Report

Introduction and Summary Observations

The findings presented in this report are based on the completion of detailed surveys received from 15 investor-owned utilities, 26 public power utilities, 26 electric cooperatives, and 8 electric utilities in Canada. This utility sample represents electric power service to more than 32 million customers in the US and Canada, amounting to a considerable 20% sample based on North American customer totals.

More than one-half of the survey participants were from "large" utilities (serving at least 100,000 customers. Eight NERC regions were each represented by three or more utilities.

More information on the respondent utilities can be found on the next two pages. A listing of all participating utilities is included at the end of this report.

Responders by Category

Summary	75	100%

Type

Investor Owned	15	20%
Public Power	26	35%
Cooperative	26	35%
Canada	8	11%

Number of Customers

<100k	36	48%
100k-499k	28	37%
>=500k	11	15%

NERC Interconnection region

NPCC	9	12%
RFC	10	13%
SERC	22	29%
FRCC	3	4%
MRO	6	8%
SPP	5	7%
TRE	4	5%
WECC	16	21%

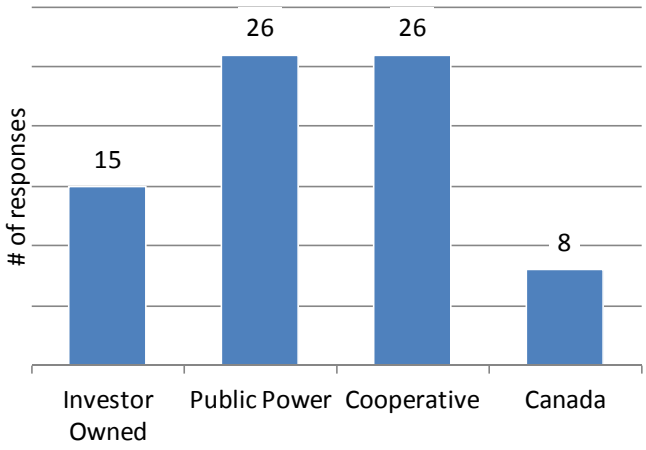


Fig. i

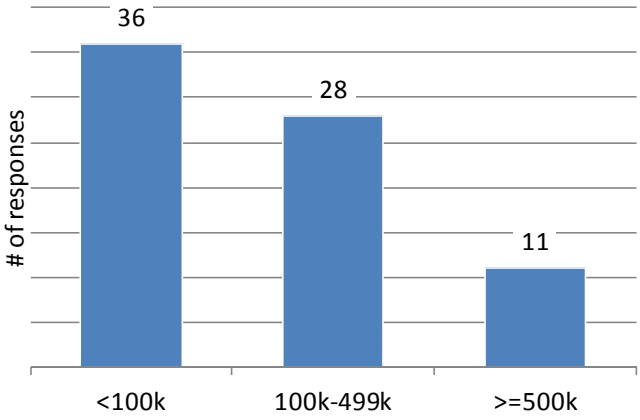
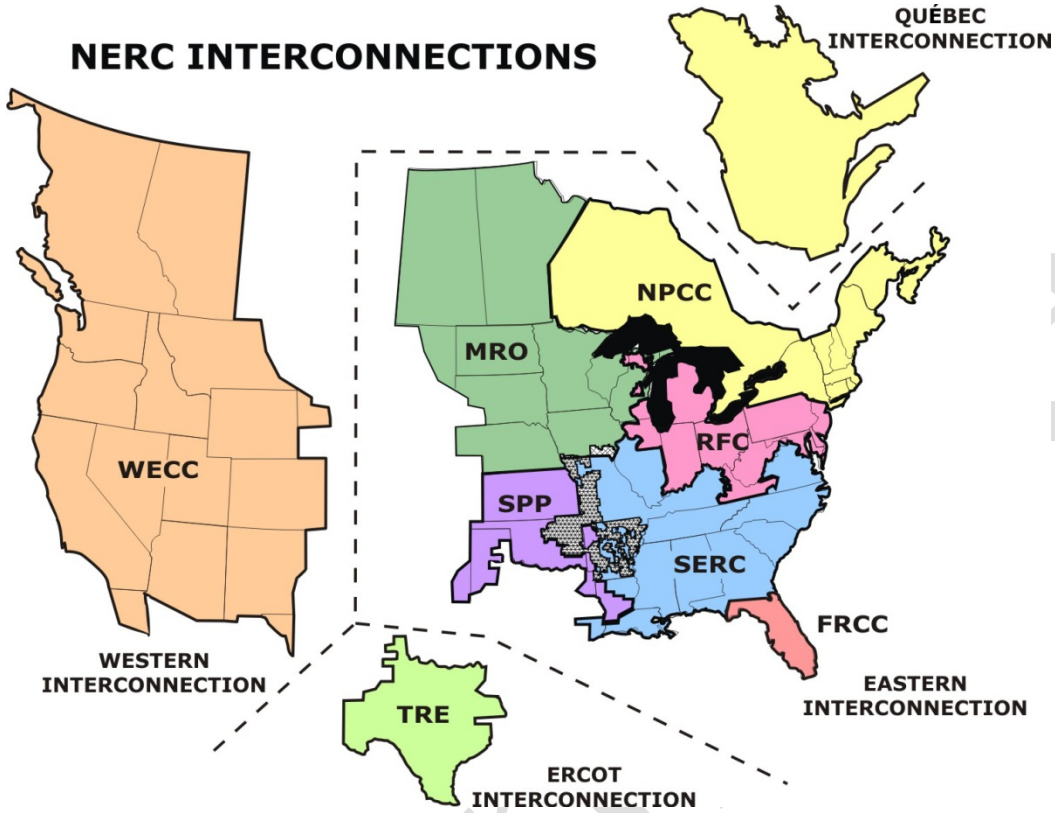


Fig. ii



Responses by NERC region:

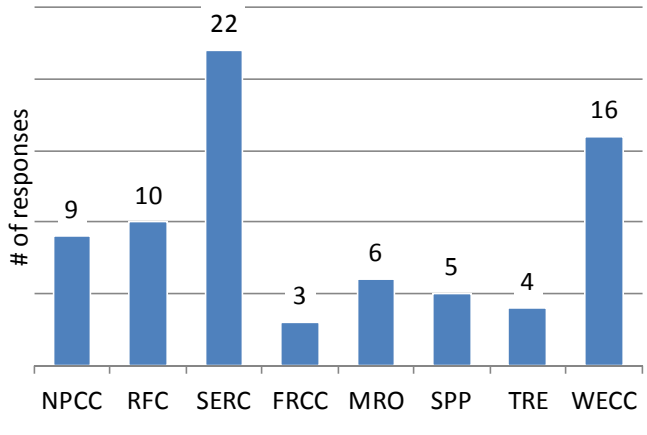


Fig. iii

1. Please indicate the approximate number of feeders on your system that operate at the following voltages: 4kV, 13kV/15kV, 22kV/26kV, 33kV/38kV

The 75 survey respondents account for many thousands of primary feeders. Newton-Evans Research estimates the total number of primary distribution feeders in the US and Canada to be 175,000-180,000. Of this total, some 34122 feeders, (providing a 19% sample), are separated into 4kv, 13kv, 24kv, and 35kv. Note in the chart below that the majority of utilities (and the majority of feeders) operate MV feeders at 13/15kV ranges.

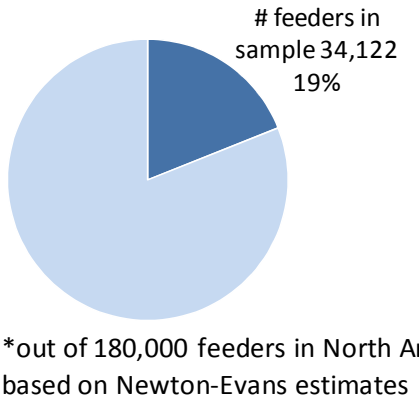


Fig. 1a

Number of feeders indicated as being in operation by sample of 75 responding utilities

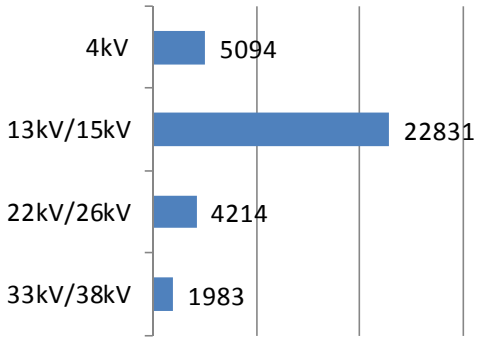


Fig. 1b

Utilities Participating in the Study

Investor Owned	
Baltimore Gas & Electric	MD
Bangor Hydro	ME
Central Hudson G&E	NY
Consumers Energy	MI
DTE	MI
Duke Progress Energy	NC
Empire District Electric Company	MO
Mid American Energy	IA
OG&E	OK
Oncor Electric Delivery	TX
Pepco	DC
PSE&G	NJ
UNITIL	NH
Westar Energy	KS
XCEL Minnesota	MN

Public Power	
Austin Energy	TX
City of Roseville	CA
Clark Public Utilities	WA
Cleveland Utilities	TN
Clinton Utilities Board	TN
Cowlitz PUD	WA
Eugene Water & Electric Board	OR
Fort Collins	CO
Grant PUD	WA
Greenville Utilities	NC
Hagerstown Light Department	MD
Heber Light & Power	UT
Huntsville Utilities	AL
JEA	FL
Kerrville Public Utility Board	TX
KEYS Energy	FL
Lafayette Utilities System	LA
Lodi Electric Utility	CA
Nashville Electric Service	TN
Omaha Public Power District	NE
Riverside Public Utilities	CA
Salem Electric Dept.	VA
Seattle City Light	WA
SMUD	CA
Snohomish County PUD	WA
Tacoma Power	WA

Cooperative	
Carroll EMC	GA
Cass County Electric	ND
Central Virginia E.C (CVEC)	VA
Citizens Electric Corporation	MO
Clay Electric Cooperative, Inc.	FL
Dakota Electric Association	MN
Energy United	NC
Greystone Power Corp	GA
Holy Cross Energy	CO
Jackson EMC	GA
Mid-Carolina Electric Coop	SC
Middle Tennessee EMC	TN
Midwest Energy	KS
NOVEC	VA
Oconto Electric Cooperative	WI
Ozarks Electric Cooperative	AR
Pickwick Electric Cooperative	TN
Rappahannock Electric Coop	VA
Rutherford EMC	NC
Sawnee EMC	GA
Sioux Valley Energy	SD
South Central Indiana REMC	IN
South Kentucky RECC	KY
Southern Maryland E.C.	MD
Tipmont REMC	IN
United Cooperative Services	TX

Canada	
City of Medicine Hat	AB
EPCOR	AB
Horizon Utilities Corporation	ON
Hydro-Sherbrooke	QC
London Hydro	ON
Newfoundland Power	NF
Saint John Energy	NB
Whitby Hydro Electric Company	ON