

# Ice Storm 2013

## Technical Briefing

January 9, 2014

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President and CEO

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Executive Vice President of Electric Operations

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Executive Vice President of Customer Care

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Vice President Communications and Public Affairs





# Today

## Storm Preparation

## Grid Restoration (3 Phases)

## Communication

## Road Ahead

## Questions

Credit: Toronto.CTVnews.ca



Credit: Toronto.CTVnews.ca  
J.P. Moczulski/ THE CANADIAN PRESS



**The most disruptive incident we have faced**





# Emergency Preparedness Planning (EPP)

Monitoring Storm  
(Freezing Rain warning)

Supervisors & Crews  
readied (Dec 21)

Declare Level 3 Emergency  
(Dec 22)

Activate System Operations  
Centre (SOC) and Local  
Incident Command Centers  
(LICC)

# Level 3 Emergency Declared

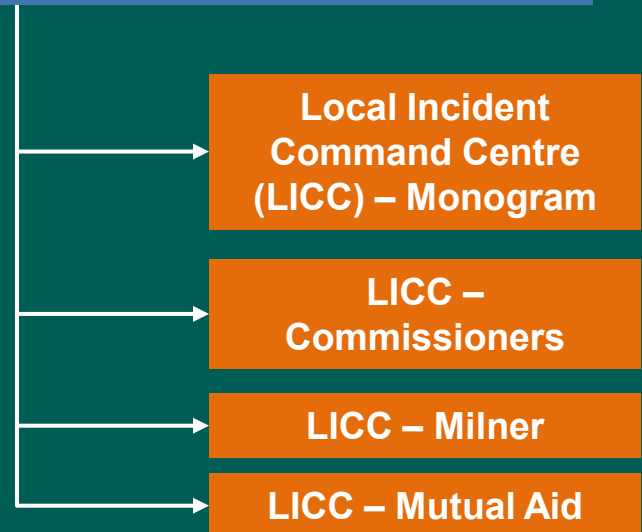
## EOC activated at 04:00 22<sup>nd</sup> Dec



**Emergency Operations  
Centre (EOC)**



**System Operations Centre  
(SOC)**







# Storm Impact

Greater than:

- 300,000 customers out
- 20x normal OMS (outage management system) events
- 100x call volume
- 800 Traffic lights out
- 80 - 911 calls
- 500 wires down
- 160 locations (Police onsite)
- Live wires!
- Critical Infrastructure out
- Roads blocked (trees/branches)

Credit: Toronto.CTVnews.ca  
Chris Young/ THE CANADIAN PRESS





# EPP Mobilization

- Level 3 Emergency
- Activate EOC / LICC's
- TEMPC coordination  
(Toronto Emergency Management Program Committee)
- Roster staff 7/24
- Issue call for Mutual Aid
- Logistics (materials, fuel)



# EPP Execution

Planned logical restoration:

- Police, Fire, Ambulance – make safe!
- Damage assessment
- Critical infrastructure
- Restore Transformer Stations
- Restore Municipal Stations
- Energize Feeders: Big, Medium & Small wires







# Mutual Assistance

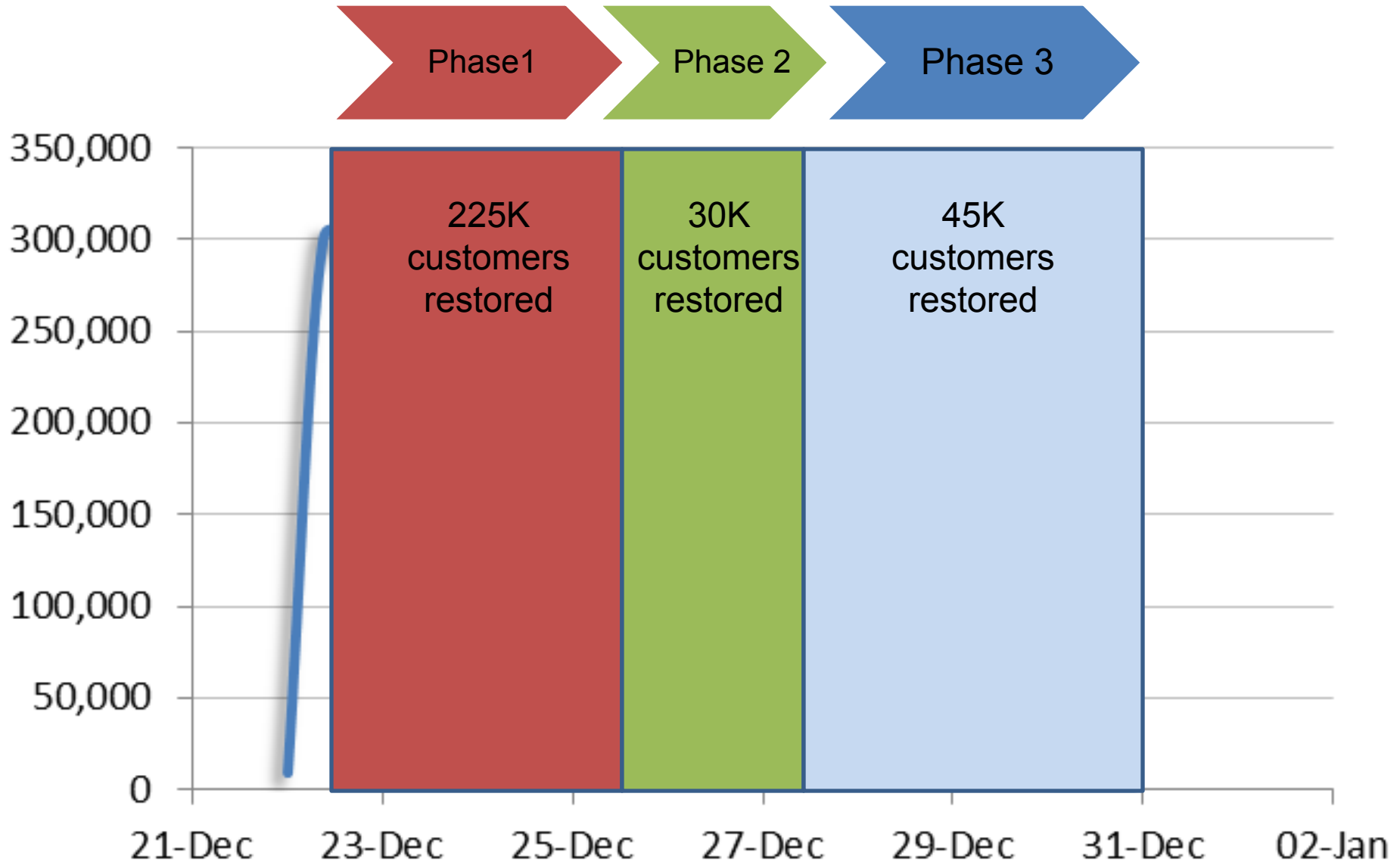
## 9 Utility Companies

- Transportation
- Lodging >130 rooms
- Food > 2000 meals
- Clothing
- Safety training
- Work Orientation
- Mutual Aid > 260 resources

8 local contractors > 150

Total Support > 400

# Customer Restoration Profile







# Grid Restoration Phase I

- Make Safe
  - Damage Assessment
  - Restore critical loads
  - Restore Transformer Station
  - Mobilize Mutual Aid
- > 225,000 restored (75%)





# Grid Restoration Phase II

- Restore Municipal Stations
- Restore main feeders
- Restore multi-residential
- Restore lateral feeders

> 255,000 restored (85%)





# Grid Restoration Phase III

- Restore individual services
- Restore back yard construction
- Reconnect Electrical Safety Authority (ESA) approvals
- Remaining 5,000 restored by Jan 2
- Demobilization planning



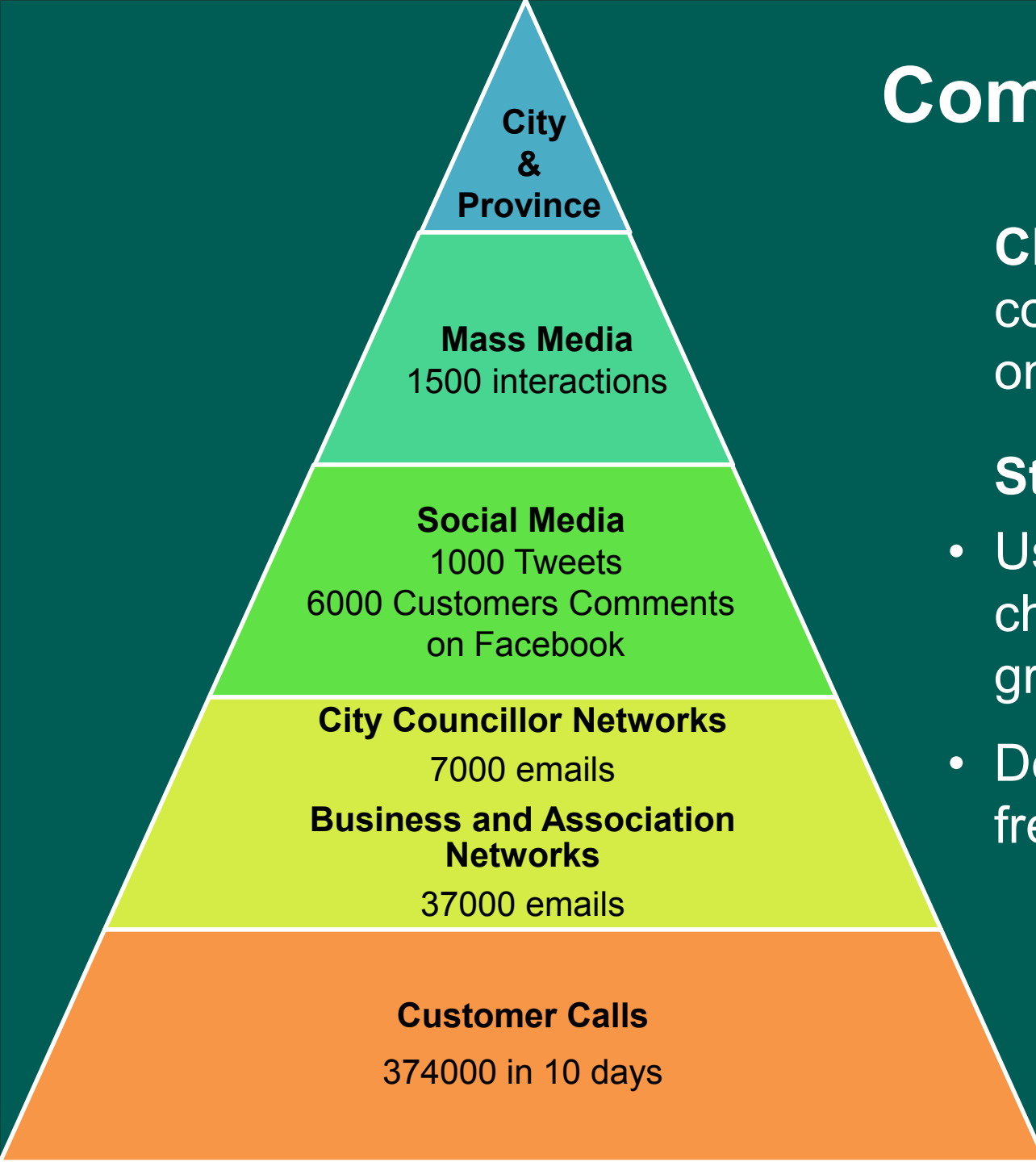


# Customer Owned Equipment Damage

- Approx 3000 customers
- Where possible, made temporary connections
- Coordinated expedited process with ESA
- Offered qualified contractor lists



# Communications



## Challenge

communication relies on electricity

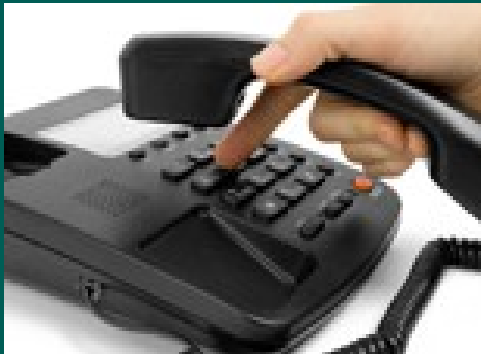
## Strategy

- Use all available channels to get the greatest reach
- Deliver information frequently

# Communications



**374,000 calls in 10 days**



## **Outreach to:**

- Business customers , associations and property management companies
- Life support and vulnerable persons

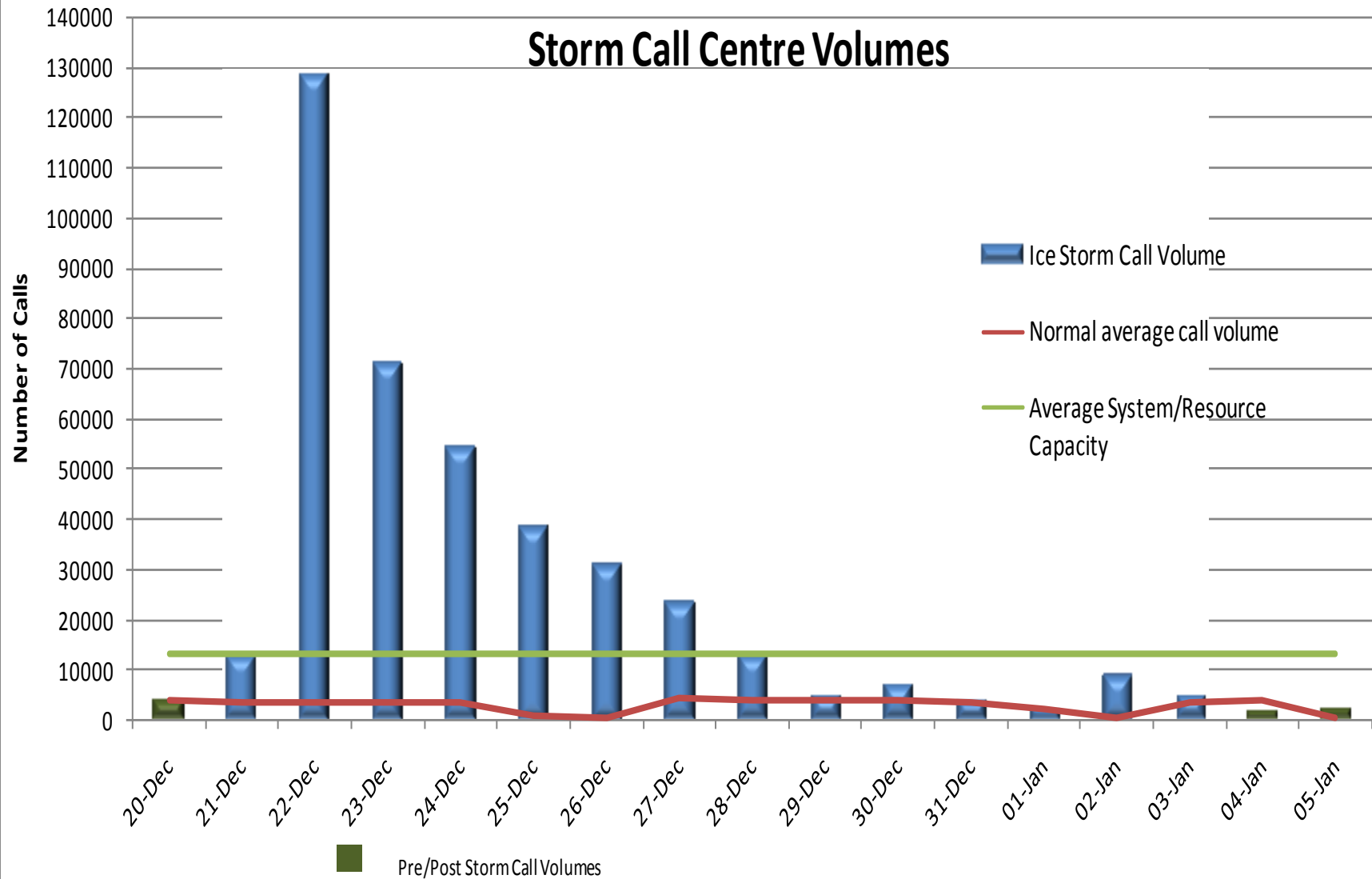


## **Continued focus on:**

- Public safety awareness and caution



# Call Centre Volumes



# Our Technology

- Supervisory Control And Data Acquisition (SCADA)
- Outage Management System (OMS)
- Distribution Management System (DMS)
- GPS in trucks
- Meters
- Call Centre





# In Summary...

- ✓ Safety first
- ✓ All critical loads restored within 36 hours
- ✓ 75% restored in the first 48 hours
- ✓ Effective mutual aid coordination
- ✓ 24/7 operations for 13 days

# Road Forward

## Independent Review Panel

Steering Committee Chair  
**David McFadden, QC**

Members

**Joe Pennachetti**  
(City of Toronto)

**Sean Conway**  
(Centre for Urban Energy- Ryerson University)

**Industry Experts**  
(To be named)

Davies Consulting

- Forestry
- Grid Response & Design
- Customer Communication





Questions