



## Energy Efficiency Portfolio Plan

# Phase II (GPY4-6) Plan

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## Overview of Energy Efficiency Portfolio Plan

### Agenda

- Overview
  - Basis of Plan
  - Lessons Learned
- PY 4-6 Plan
  - Guiding Principles
  - Programs



## Overview

- Proposed plan is based
  - on actual experience and lessons learned,
  - stakeholder input from ICC Staff, AG's Office, CUB, ELPC, NRDC, City of Chicago
  - potential study
- Used TRM v1 and evaluation results for NTGR and RR
- Does not meet legislative goal for GPY4, GPY5 or GPY6



## Overview

	PGL	NSG
Annual Phase II Budget (based on 2% Cap)	\$18,416,717	\$3,300,000
Annual Phase II Budget (after 3% for EM&V)	\$17,864,215	\$3,201,000
\$/Therm Saved (PY2 Actual thru 5/13/13)	\$2.64	\$3.27
Calculated Goal using \$/Therm Saved	6,766,748	978,899
Legislative Goal (therms)	11,226,846	2,220,143
Potential Study (million net therms)	4.6 – 7.5	1.2 – 2.1

Looking at:

- Phase I experience
- \$/net therm saved on a life cycle basis and on a year 1 basis
- Potential Study results
- Current price of natural gas, what it takes to motivate customers/participant paybacks for investments in energy efficiency)
- Continuing to increase net savings, interest to keep incentives generous



## Key Lessons Learned, Resulting Changes Forward

1. **Customer and Trade Ally Trust and Awareness** – huge issue, much bigger obstacle than anticipated, especially within PGL territory. Work through existing community and business groups, cross marketing of programs, various languages.
2. **Need program “umbrella” based on how customers and allies think** - alignment by service class, how customers, allies think about services. More one-stop programs.
3. **Natural Gas efficiency competing with electric, other capital projects** – current low gas price makes project economics tougher to compete. Flexibility for incentives; drop high cost measures.
4. **Continue to update portfolio with cost effective offers within programs** – Heavier emphasis on Engineering Assistance, Process Optimization efforts given more competitive customer returns. Starting to work with customers on quick payback measures, move over time to more complex, longer payback, but also longer-lived measures/projects.



## Key Lessons Learned, Resulting Changes Forward

5. **Joint programs valuable, but administratively complex** – in joint programs need to keep close eye on emphasis on both gas and electric, or gas can get lost. Customers and allies like the joint nature of the programs, implementation needs to ensure focus on both fuels.
6. **Need to weave in lower cost programs** – changes to include a) home energy reports/behavior change opt out program for PY3, b) potential educational program, and c) continue to explore an upstream HVAC distributor program.
7. **Serve all, but concentrate on segments with greater gas savings** – Concentrate on specific groups within business segment with highest potential at lowest cost per therm.



## Phase II Plan Design Guiding Principles

- Something for everyone
- Each utility portfolio based on market differences (NSG will be weighted to residential, PGL toward C&I, large multifamily)
- Focus on opportunities from market segments (not balancing expenditures to revenue share)
- Based on PY3 program foundation
- Will be cost effective at the portfolio level
- Focus on most cost-effective measures; look at measures from both first year and life cycle savings cost/therm saved basis



## Phase II Plan Design New and Improved!

- One Stop Shop concept incorporated with umbrella program and different paths
- Budget set aside for CANDI implementation
- School Program (5<sup>th</sup> Graders); likely based on RFP with ComEd and Nicor
- Initial research into Upstream HVAC shows interest by some distributors; more research and detailed discussions needed
- Process improvements – Residential Rebates online applications; Benlink running well; ComEd to develop application for tablet for SBES





## New Team Members with Niche Expertise

Team Member	Role
Franklin Energy	Administration, Implementation
Applied Energy Group	Design/Benefit Cost Analysis
KEMA	Integration w/ ComEd C&I programs, lead sharing
Kinergetics	Large gas saving projects (process, steam)
CNT Energy	Multifamily and Small Business offerings
Energy Center of Wisconsin	Upstream HVAC
Association for Energy Affordability	Multifamily offerings
Primera Engineers	Gas Optimization – Mid Sized Commercial
Helgeson Enterprises	Enhanced Incentive/Rebate Processing



## Phase II Programs

### 1. Residential programs

Path 1 – Direct Install/High Level Assessment

Path 2 – Prescriptive Incentives

### 2. Multifamily programs

Path 1 – Direct Install/Facility Energy Assessment

Path 2 – Prescriptive Incentives

Path 3 – Custom/Building Envelope

Path 4 – Multifamily Building Tune Ups

### 3. Residential Outreach and Education

Path 1 – Energy Use Behavior Change

Path 2 – Targeted Outreach Campaigns

### 4. Business Program – Existing Facilities

Path 1 – Prescriptive Incentives

Path 2 – Custom Incentives

Path 3 – Engineering Assistance

Path 4 – Tune Ups

Path 5 – Direct Install

### 5. Small Business Program

Path 1 – Energy Assessment/Direct Install

Path 2 – Deeper Retrofit Measures/Fixed Pricing

### 6. New Development Program

Path 1 – Building Codes

Path 2 – R&D/New Technology Demonstration

PGL and NSG will have same programs but different emphasis on each program due to customer base.

## Potential Programs at a Glance – with 2% Cap

Peoples Gas - Program	Est. Therm Savings	Est. Budget	TRC	Levelized \$/Therm Saved
1. Residential Program	626,521	\$3.35 M	0.92	\$0.47
2. Multifamily	1,521,619	\$2.93 M	2.00	\$0.20
3. Residential Outreach and Education	942,500	\$1.14 M	0.68	\$1.28
4. Business Program – Existing Facilities	3,151,741	\$8.47 M	2.46	\$0.23
5. Small Business Program	602,189	\$.92 M	1.72	\$0.13
6. New Development Program	Tbd	\$.21 M	tbd	tbd
EM&V		\$.55 M		
Other (Portfolio, OBF, DCEO admin)		\$.75 M		
<b>Total</b>	<b>6,844,569</b>	<b>\$18.3 M</b>	<b>2.30</b>	

***All numbers throughout this presentation are preliminary.***

## Potential Programs at a Glance – with 2% Cap

North Shore Gas - Program	Est. Therm Savings	Est. Budget	TRC	Levelized \$/Therm Saved
1. Residential Program	210,899	\$1.05 M	0.92	\$0.45
2. Multifamily	162,798	\$.34 M	2.00	\$0.22
3. Residential Outreach and Education	507,500	\$.57 M	0.68	\$1.18
4. Business Program – Existing Facilities	601,969	\$.85 M	2.46	\$0.13
5. Small Business Program	73,350	\$.12 M	1.72	\$0.15
6. New Development Program	Tbd	\$.37 M		
EM&V		\$.99 M		
Other (Portfolio, OBF, DCEO admin)		\$.23 M		
<b>Total</b>	<b>1,556,516</b>	<b>\$3.30 M</b>	<b>1.53</b>	

***All numbers throughout this presentation are preliminary.***



## 1. Residential Programs

Path 1 – JumpStart Direct Install/High Level Assessment

Direct Install includes low flow showerheads, kitchen and faucet aerators, pipe insulation

Path 2 – Prescriptive Incentives for heating systems, water heaters, setback thermostats, pipe insulation, duct sealing;

Research upstream rebates for HVAC

- Joint program with ComEd
- No changes to past program but SFDI and Residential Rebates bundled to facilitate participation by customer.



# 1. Residential Programs

	PGL	NSG
Estimated Savings (therms)	626,521	210,899
Estimated Budget	\$3,346,163	\$1,052,564
TRC	0.92	0.92
Levelized \$/Therm Saved	\$0.47	\$0.45

Same participation, savings, and budget numbers are estimated for GPY4, GPY5 and GPY6



## 2. Multifamily Program

Path 1 – Direct Install/Facility Energy Assessment

Direct Install includes low flow showerheads, kitchen and faucet aerators, pipe insulation where accessible, setback thermostats

Path 2 – Prescriptive Incentives for heating systems, water heaters, setback thermostats, pipe insulation, duct sealing, direct control ventilation, dampers, food service equipment;

Path 3 – Custom Incentives for measures like attic insulation

Path 4 – Multifamily Building Tune Ups

- Joint program with ComEd
- No changes to past program but MF DI and C/I Rebates bundled to facilitate participation by customer.
- Financing available



## 2. Multifamily Programs

	PGL	NSG
Estimated Savings (therms)	1,521,619	162,798
Estimated Budget	\$2,932,107	\$337,138
TRC	2.00	2.00
Levelized \$/Therm Saved	\$0.20	\$0.22

Same participation, savings, and budget numbers are estimated for GPY4, GPY5 and GPY6





### 3. Residential Outreach and Education

Path 1 – Energy Use Behavior Change (Home Energy Reports by Opower);  
will also be used for marketing and increasing awareness.

Path 2 – Targeted Outreach Campaigns

Outreach campaigns with City, neighborhoods,  
community-based organizations

- Potentially includes school program (new for PGL/NSG jointly with ComEd and Nicor)
- Although focused on residential, could expand to some small commercial outreach as well



### 3. Residential Outreach and Education Programs

	PGL	NSG
Estimated Savings (therms)	942,500	507,500
Estimated Budget	\$1,138,369	\$565,195
TRC	0.68	0.68
Levelized \$/Therm Saved	\$1.28	\$1.18

Same participation, savings, and budget numbers are estimated for GPY4, GPY5 and GPY6



## 4. Business Programs – Existing Facilities

Path 1 – Direct Install/High Level

Path 2 – Prescriptive Incentives

Path 3 – Custom Incentives

Path 4 – Engineering Assistance

Path 5 – Tune Ups

- Direct Install includes low flow showerheads , kitchen and bathroom aerators, pre-rinse sprayers
- Prescriptive Incentives includes heating systems, water heater systems, various controls, steam traps, food service equipment
- Custom incentives include various types of gas optimization projects
- Tune ups include heating system tune ups and retro-commissioning



## 4. Business Programs – Existing Facilities

	PGL	NSG
Estimated Savings (therms)	3,151,741	601,969
Estimated Budget	\$8,473,803	\$853,780
TRC	2.46	2.46
Levelized \$/Therm Saved	\$0.23	\$0.13

Same participation, savings, and budget numbers are estimated for GPY4, GPY5 and GPY6



## 5. Small Business Programs

### Path 1 – Energy Assessment/Direct Install (by Trade Ally)

Assessments for small businesses such as convenience stores, coin laundry facilities, dry cleaners, restaurants, offices, light manufacturing  
Direct Install includes low flow showerheads, kitchen and faucet aerators, pipe insulation where accessible, setback thermostat, pre-rinse sprayer

### Path 2 – Deeper Retrofit Measures/Fixed Pricing

Trade ally completed deeper energy retrofits with pre-negotiated discounted price; utility incentives cover 75-100% of retrofit costs

- Joint program with ComEd
- No changes to past program but SBES and C/I Rebates bundled to facilitate participation by customer.



## 5. Small Business Programs

	PGL	NSG
Estimated Savings (therms)	602,189	73,350
Estimated Budget	\$920,958	\$120,270
TRC	1.72	1.72
Levelized \$/Therm Saved	\$0.13	\$0.15

Same participation, savings, and budget numbers are estimated for GPY4, GPY5 and GPY6

## 6. New Development Program

- Work with CANDI on building codes
- Other potential R&D

	PGL	NSG
Estimated Savings (therms)	tbd	tbd
Estimated Budget	\$212,500	\$37,500
TRC	tbd	tbd
Levelized \$/Therm Saved	tbd	tbd

Same participation, savings, and budget numbers are estimated for GPY4, GPY5 and GPY6

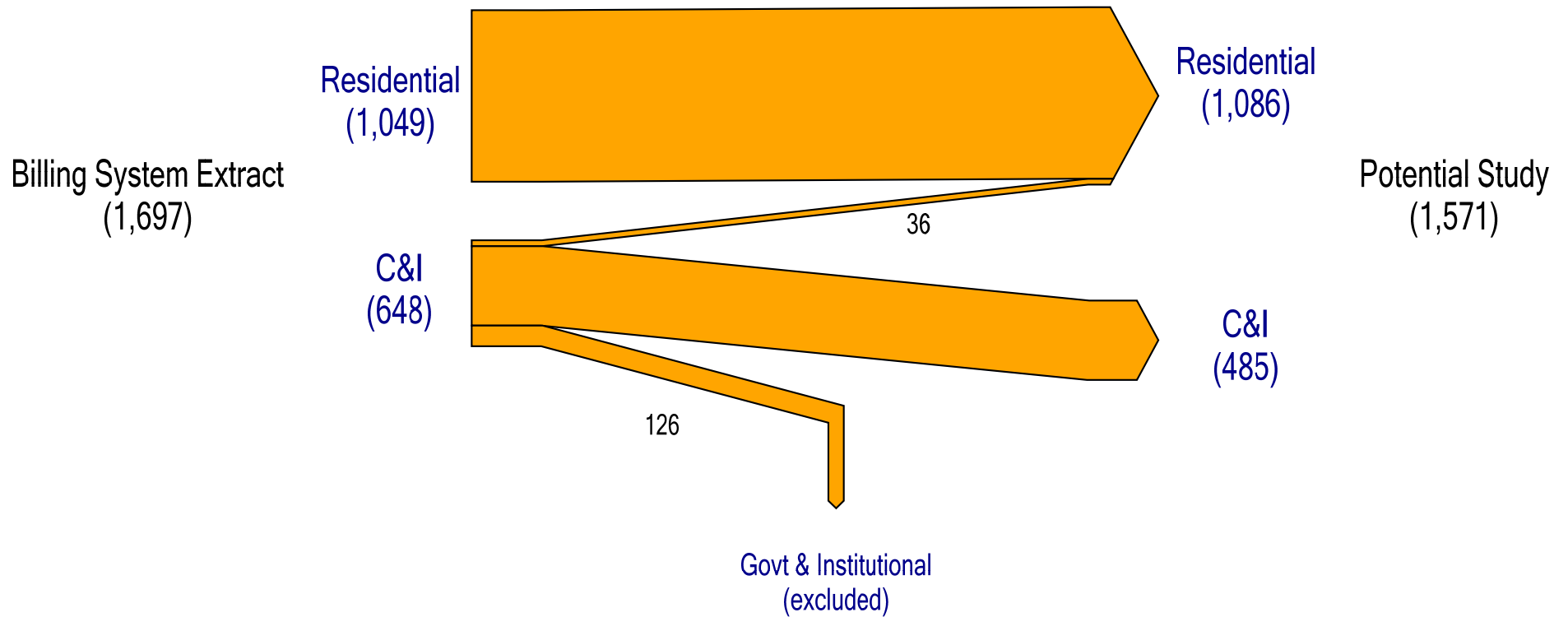
# Appendix



# DIFFERENCES BETWEEN PEOPLES GAS AND NORTH SHORE GAS

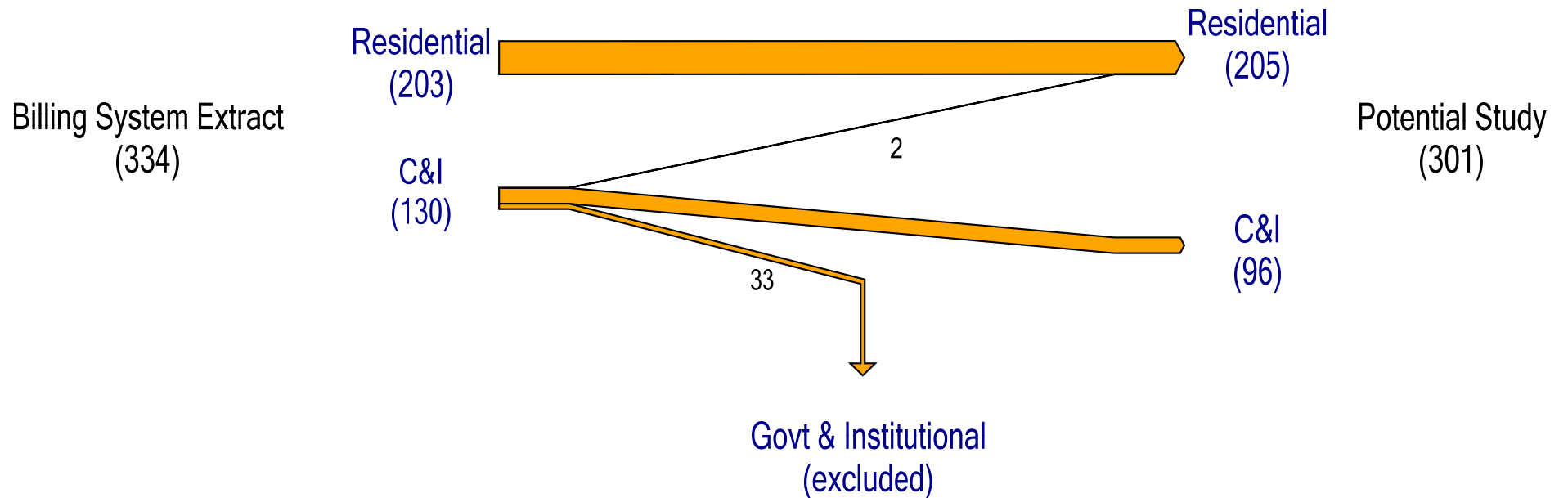


therm flows (millions)

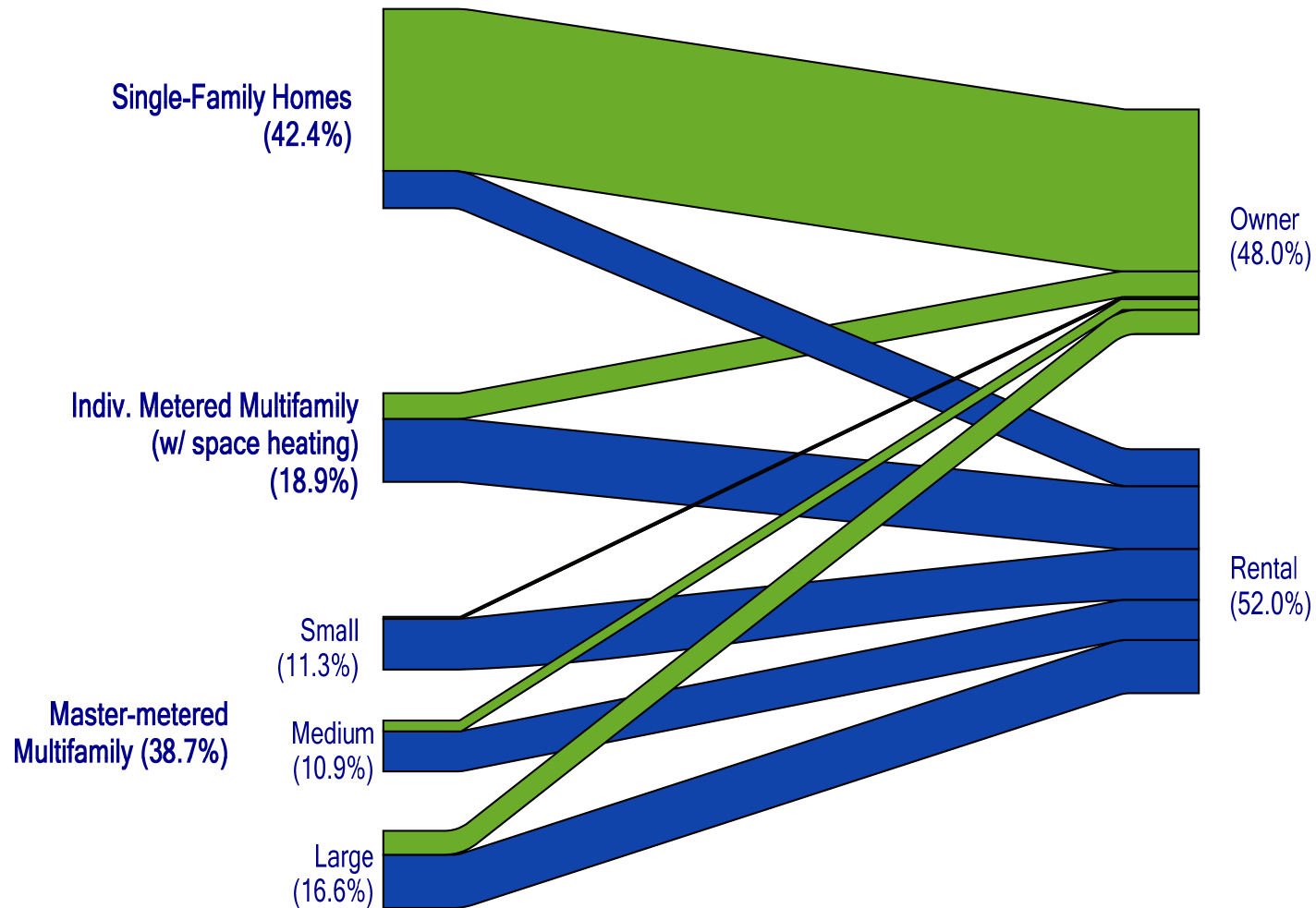


# WHERE DOES THE GAS GO? North Shore Gas sector

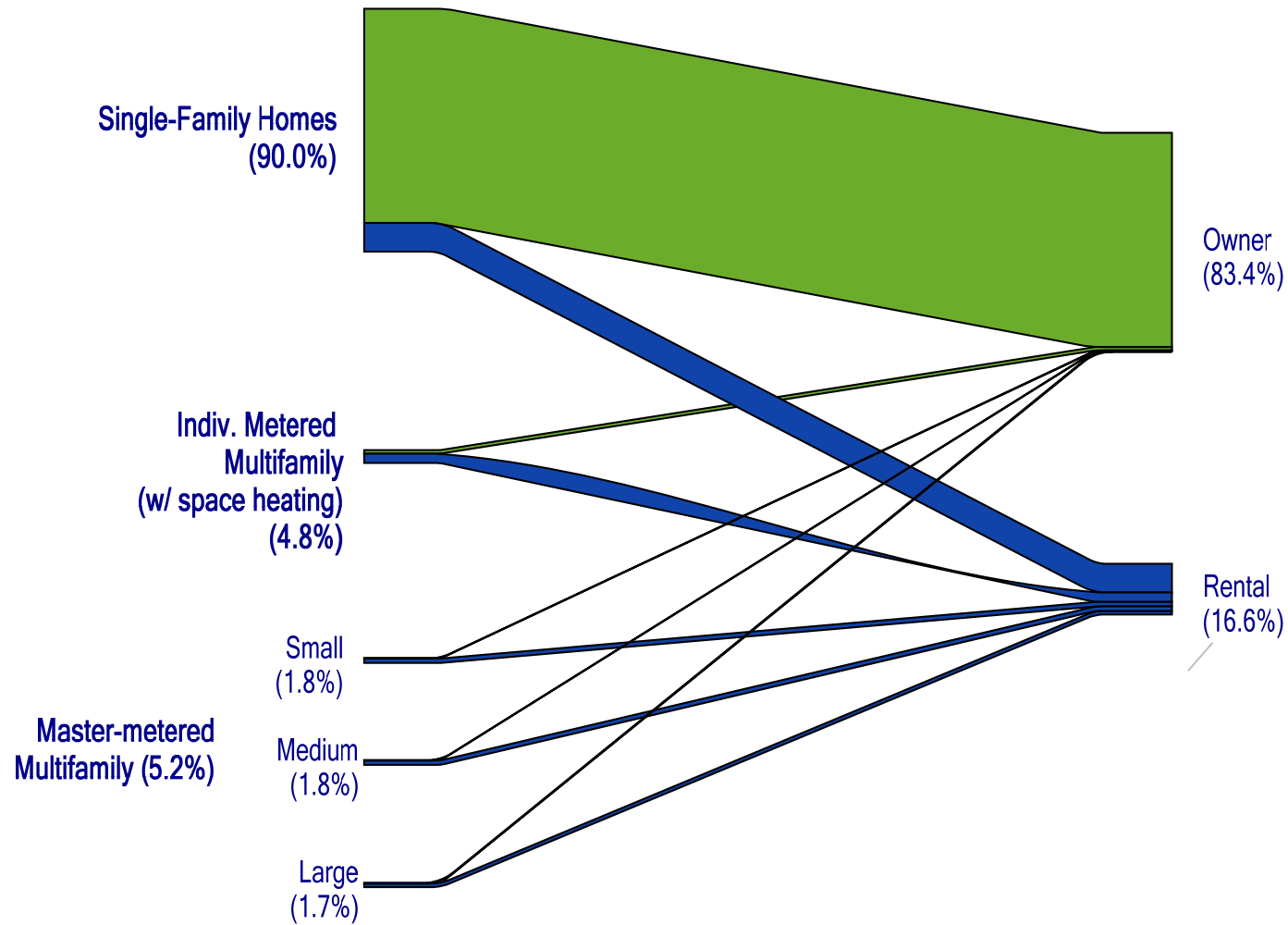
## therm flows (millions)



# gas flow by segment and owner/rental

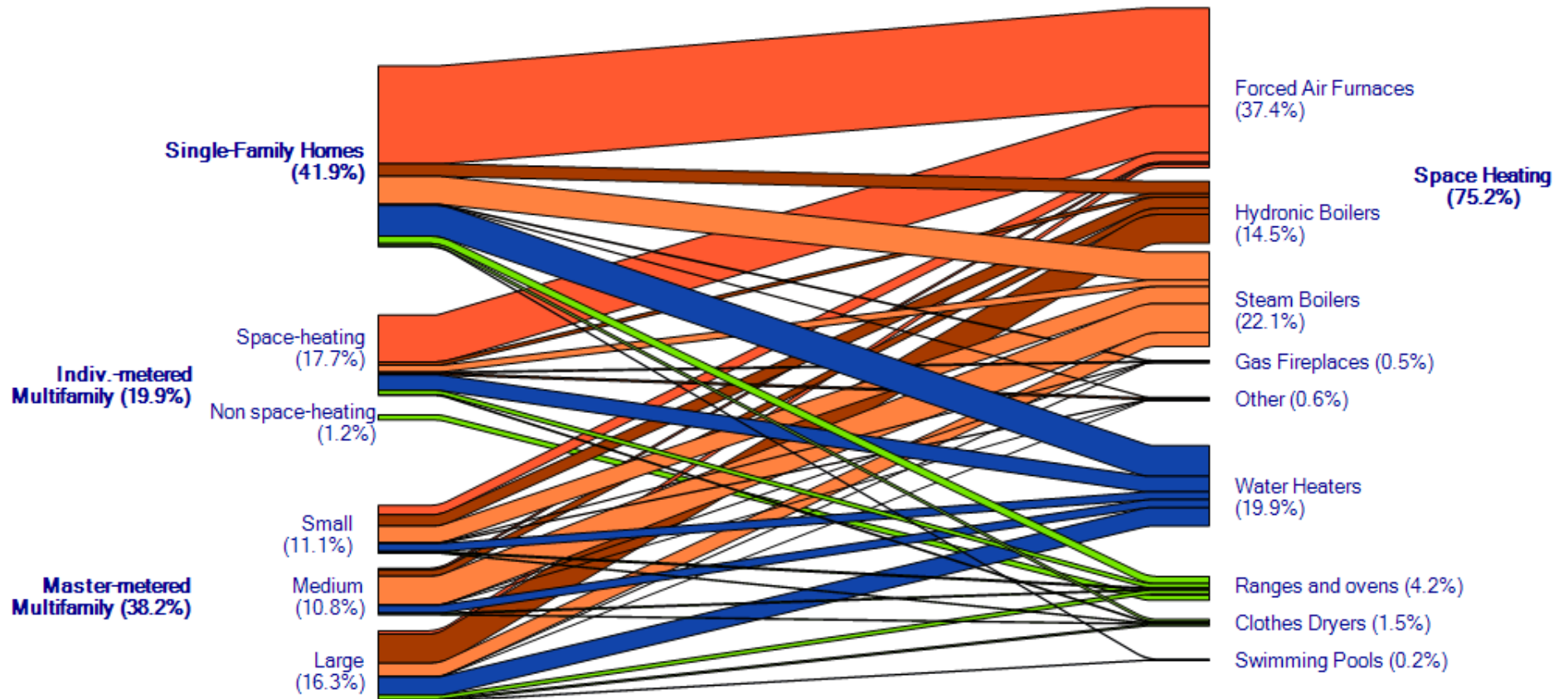


# gas flow by segment and owner/rental



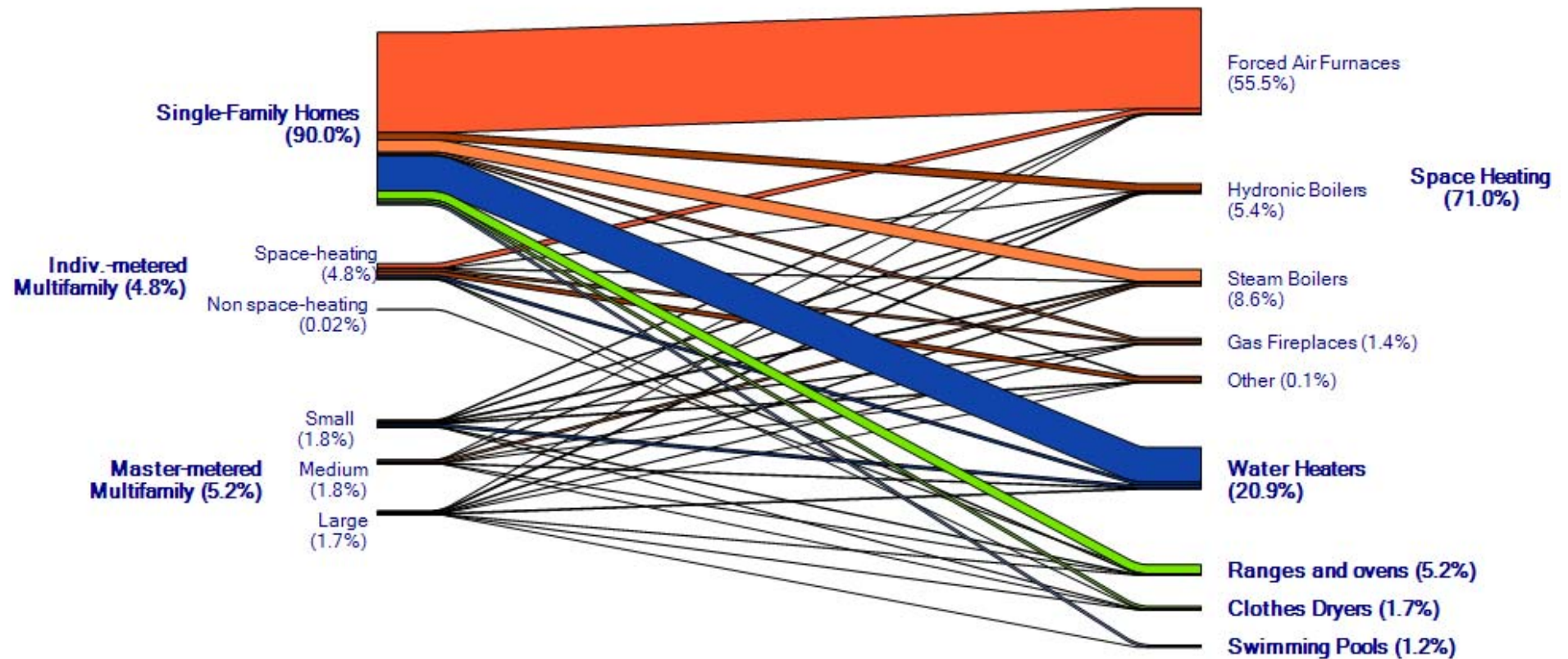
# WHERE DOES THE GAS GO? Peoples Gas residential

## gas flow by segment and end-use



# WHERE DOES THE GAS GO? North Shore Gas residential

## gas flow by segment and end-use



# ACHIEVABLE POTENTIAL





# Peoples Gas

## Achievable Potential

(assumes current gas prices; incentives set at 50% of incremental cost)

**Table ES-1**  
**Peoples Gas**  
**Efficiency Targets and Achievable Potential**

Program Year	Time Period	Efficiency Target (% of sales) <sup>1</sup>	Efficiency Target (millions of therms) <sup>2</sup>	Base Case Achievable Efficiency Potential (millions of therms)
4	June 2014-May 2015	0.8%	11.2	4.6 – 7.5
5	June 2015-May 2016	1.0%	14.0	4.6 – 7.5
6	June 2016-May 2017	1.2%	16.8	4.6 – 7.5

# North Shore Gas

## Achievable Potential

(assumes current gas prices; incentives set at 50% of incremental cost)

**Table ES-1**  
**North Shore Gas**  
**Efficiency Targets and Achievable Potential**

Program Year	Time Period	Efficiency Target (% of sales) <sup>1</sup>	Efficiency Target (millions of therms) <sup>2</sup>	Base Case Achievable Efficiency Potential (millions of therms)
4	June 2014-May 2015	0.8%	2.2	1.2 – 2.1
5	June 2015-May 2016	1.0%	2.8	1.2 – 2.1
6	June 2016-May 2017	1.2%	3.3	1.2 – 2.1