

SOUTHERN CALIFORNIA



**ASSOCIATION of  
GOVERNMENTS**

**Main Office**

818 West Seventh Street  
12th Floor  
Los Angeles, California  
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[www.scag.ca.gov](http://www.scag.ca.gov)

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First Vice President  
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Community, Economic and  
Human Development  
Paula Lantz, Pomona

Energy & Environment  
Cheryl Viegas-Walker, El Centro

Transportation  
Keith Millhouse, Ventura County  
Transportation Commission

# No. 1 MEETING OF THE

## SUSTAINABILITY SUBCOMMITTEE

**Tuesday, October 2, 2012  
10:00 a.m. – 12:00 p.m.**

**SCAG Los Angeles Office  
818 West Seventh Street, 12<sup>th</sup> Floor  
Policy Committee Room B  
Los Angeles, CA 90017  
(213) 236-1800**

### Teleconference Available

**Santa Clarita City Hall  
23920 Valencia Blvd., #300  
Santa Clarita, CA 91355**

### Videoconference Available

**Orange County Office  
600 S. Main Street, Suite 906  
Orange, CA 92863**

**San Bernardino County Office  
1170 W. 3<sup>rd</sup> Street, Suite 140  
San Bernardino, CA 92410**

**Ventura County Office  
950 County Square Drive, Suite 101  
Ventura, CA 93003**

**Imperial County Office  
1405 N. Imperial Ave., Suite 1  
El Centro, CA 92243**

**Riverside County Office  
3403 10<sup>th</sup> Street, Suite 805  
Riverside, CA 92501**

The Regional Council is comprised of 84 elected officials representing 191 cities, six counties, six County Transportation Commissions and a Tribal Government representative within Southern California.

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**Coachella Valley Association of Governments**  
**73-710 Fred Waring Drive, Suite 200**  
**Palm Desert, CA 92260**

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Cathy Alvarado at (213) 236-1896 or via email [alvarado@scag.ca.gov](mailto:alvarado@scag.ca.gov)

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. If you require such assistance, please contact SCAG at (213) 236-1928 at least 72 hours in advance of the meeting to enable SCAG to make reasonable arrangements. To request documents related to this document in an alternative format, please contact (213) 236-1928.

## **Sustainability Subcommittee Member List**

Los Angeles County: Hon. Pam O'Connor, Santa Monica, District 41 (Member): **Chair**  
Hon. Carol Chen, Cerritos, Gateway Cities (Alternate)  
Hon. Marsha McLean, Santa Clarita, North LA County (Alternate)

Orange County: Hon. Kris Murray, Duarte, District 35 (Member) **Vice-Chair**  
Hon. Sukhee Kang, Irvine, District 14 (Alternate)

Ventura County: Hon. Brian Brennan, Ventura, VCOG (Member)

San Bernardino County: Hon. Larry McCallon, Highland, District 7 (Member)  
Hon. Ed Graham, Chino Hills, District 10 (Alternate)

Riverside County: Hon. Greg Pettis, Cathedral City, District 2 (Member)

Ex-Officio: Christine Eberhard, NRDC (Member)  
David Shepherd, BIA (Alternate)  
Terry Roberts, ARB (Other)

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# SUSTAINABILITY SUBCOMMITTEE

## AGENDA

### OCTOBER 2, 2012

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*The Sustainability Subcommittee may consider and act upon any of the items listed on the agenda regardless of whether they are listed as information or action items.*

#### **CALL TO ORDER & PLEDGE OF ALLEGIANCE**

*(Hon. Pam O'Connor, Chair)*

**PUBLIC COMMENT PERIOD** – Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Subcommittee, must fill out and present a speaker's card to the Assistant prior to speaking. Comments will be limited to three minutes. The Chair may limit the total time for all comments to twenty minutes.

#### **REVIEW AND PRIORITIZE AGENDA ITEMS**

##### **ACTION ITEMS**

**Time Page**

- |  |                   |                 |          |
|--|-------------------|-----------------|----------|
| 1. <u>Review of Sustainability Subcommittee Schedule Outlook</u><br><i>(Hon. Pam O'Connor)</i> | <b>Attachment</b> | <b>15 mins.</b> | <b>1</b> |
|--|-------------------|-----------------|----------|

**Recommended Action:** Approve Subcommittee Meeting Outlook

##### **INFORMATION ITEMS**

- |  |                   |                 |          |
|--|-------------------|-----------------|----------|
| 2. <u>Presentation: Scenario Modeling at the Regional Level</u><br><i>(Peter Calthorpe, Calthorpe Associates)</i>  | <b>Attachment</b> | <b>30 mins.</b> | <b>2</b> |
| 3. <u>Presentation: SCAG Scenario Planning Model</u><br><i>(Guoxiong Huang, SCAG Staff)</i>  |                   | <b>20 mins.</b> |          |
| 4. <u>Establish Future Subcommittee Meeting Dates</u><br><i>(Hon. Pam O'Connor, Chair)</i><br><i>Proposed Meeting Dates and Times for 2<sup>nd</sup> Joint Subcommittee Meeting:</i><br>October 24, 2012, 10am-12pm<br>October 25, 2012, 11am-1pm<br>November 5, 2012, 10am-12pm |                   | <b>15 mins.</b> |          |

##### **CHAIR'S REPORT**

*(Hon. Pam O'Connor, Chair)*

# SUSTAINABILITY SUBCOMMITTEE

## AGENDA

### OCTOBER 2, 2012

---

#### **STAFF REPORT**

*(Marco Anderson, SCAG Staff)*

#### **FUTURE AGENDA ITEMS**

Any Subcommittee member or staff desiring to place items on a future agenda may make such a request.

#### **ANNOUNCEMENTS**

#### **ADJOURNMENT**

*Please note that the next regular meeting of the Public Health Subcommittee meeting will be a joint meeting with the Active Transportation and Sustainability Subcommittees. The meeting date and time will be determined.*



## SUSTAINABILITY SUBCOMMITTEE

### Deliverables:

1. Action Plan for implementation of key land-use & local development strategies identified in the 2012–2035 RTP/SCS
2. Recommendations to Policy Committees, which may include the following:
  - Policy recommendations
  - Updated methods, processes, and performance measures
  - Technical Studies and projects
  - Model Ordinances

### Meeting #1

#### Defining and Measuring Sustainability

**Objective:** Introduce the tools, and data needs for modeling regional sustainable scenario development.

- ◆ Overview of the data needs and current challenges regarding modeling sustainable scenario systems
- ◆ Update on demographic changes in transportation choices and settlement patterns
- ◆ Work plan for subcommittee and steps to achieve deliverables

**Action:** Approve Sustainability Subcommittee Work Plan

**Potential Presenters:** Peter Calthorpe (CA), Guoxiong Huang (SCAG)

### Meeting #2—Joint Meeting

#### The 2012-2035 RTP/SCS (Joint Meeting with Active Transportation, and Public Health)

**Objective:** Review 2012–2035 RTP/SCS and implementation actions and strategies

- ◆ Current SCAG policies and planned programs and projects related to addressing Active Transportation, Public Health, and Sustainability (HQTAs, future call for projects, etc.)
- ◆ Reauthorization of transportation funding as it applies to Active Transportation, Public Health, and Sustainability programs
- ◆ Current and possible performance measures for Active Transportation, Public Health, and Sustainability

**Potential Presenters:** SCAG staff, Shahrzad Amiri (LACMTA), Jaime de la Vega (LADOT), other Compass Blueprint Grantees

### Meeting #3

#### The Future of the Real Estate and Building Industries

**Objective:** Understand new trends in real estate development and sustainable building practices

- ◆ Review the challenges and opportunities facing both greenfield and infill development
- ◆ Discuss the factors that influence locational choices for firms and households
- ◆ Strategies for subregions to address workforce housing issues

**Potential Presenters:** Mott Smith (Infill Builders Association), Devon Hartman (Every Watt Matters), Walker Wells (Green Alliance), Representative from (US Green Building Council), Representative from (Building Industry Association), Representatives from (CBRE)

### Meeting #4—Joint Meeting

#### Sustainability and Equity (Joint Meeting with Active Transportation, and Public Health)

**Objective:** Understand the impacts of sustainability-focused planning on environmental justice and equity

- ◆ Address comments on the need to adequately address affordable housing and public health issues for low-income and underserved communities
  - Is there a correlation between transit-oriented development and gentrification?
  - Post redevelopment, is there an effective model of affordable housing provision?
  - What are the connections between jobs housing balance and housing affordability?

**Potential Presenters:** Andrea Hricko (USC), Michael Woo (Cal Poly Pomona), Cecilia Estolano (Estolano LeSar Perez), Shelley Poticha (HUD), Representative from Housing Authority of LA, Representative from Affordable Housing Developer, SANBAG, Allison Mannos (Multicultural Communities for Mobility)

### Meeting #5

#### Sustainability and the Regional Economy

**Objective:** Discuss the relationship between regional sustainable development strategies, and economic development strategies

- ◆ Discuss the relative benefits and costs of regional sustainability
- ◆ Discuss performance monitoring of economic growth and sustainable development
- ◆ Understand the relationship between livability, quality of life and economic desirability

**Potential Presenters:** Wallace Walrod (OCBC), Marlon Boarnet (USC), Steve Levy (Center for the Continuing Study of the CA Economy), April Economides (Green Octopus Consulting), Bob Bunyan (Orange County Workforce Investment Board)

### Meeting #6

#### Recommendations

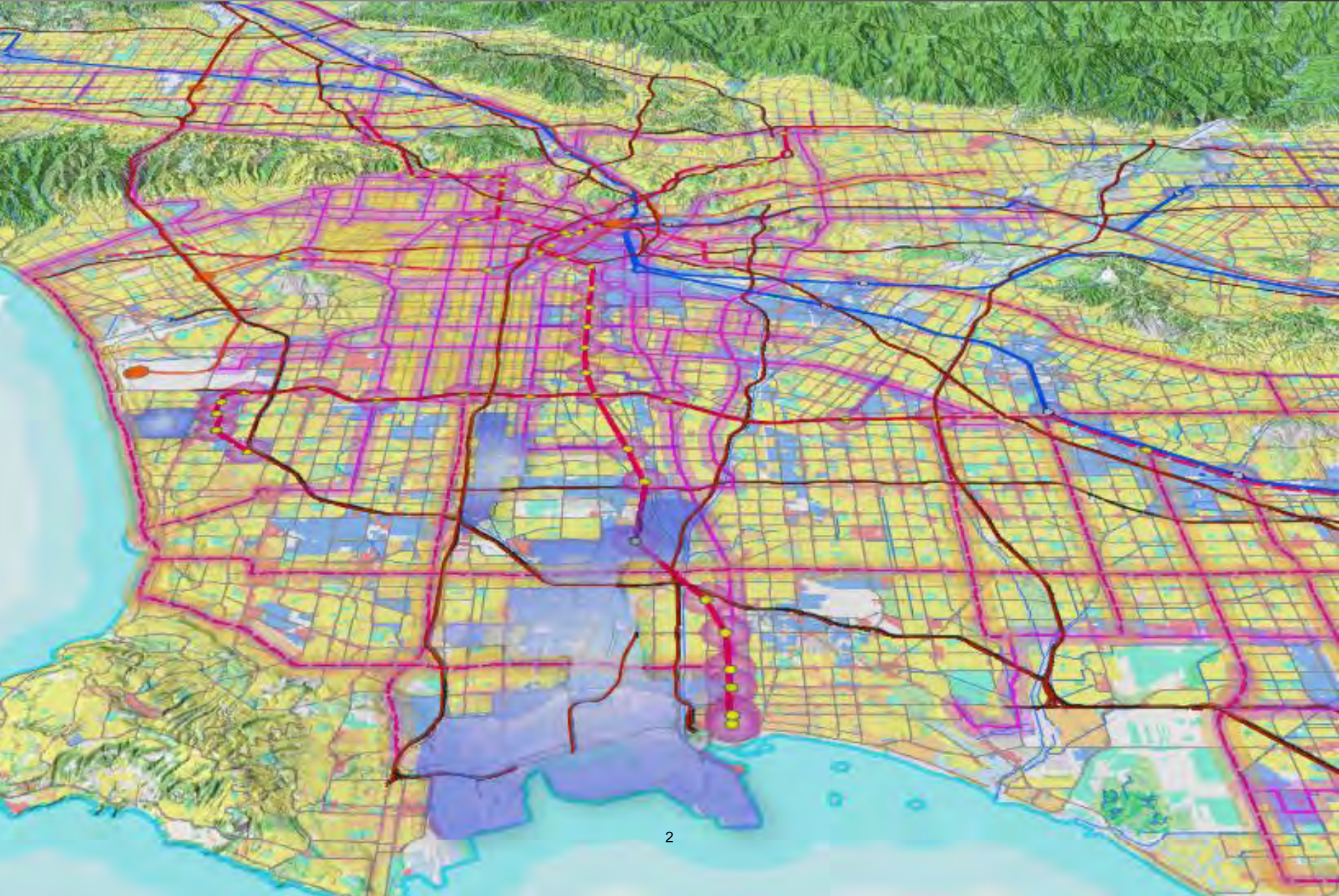
**Objective:** Review and recommend steps for implementation of 2012-2035 RTP/SCS and framework for development of 2016 RTP/SCS

- ◆ Review and recommend steps for 2012-2035 RTP/SCS implementation and identify emerging issue to address in development of 2016 RTP/SCS

**Action:** Recommend steps for moving forward key strategies from 2012-2035 RTP/SCS and framework for development of 2016 RTP/SCS

**Potential Presenters:** SCAG,

# Los Angeles Regional Plan

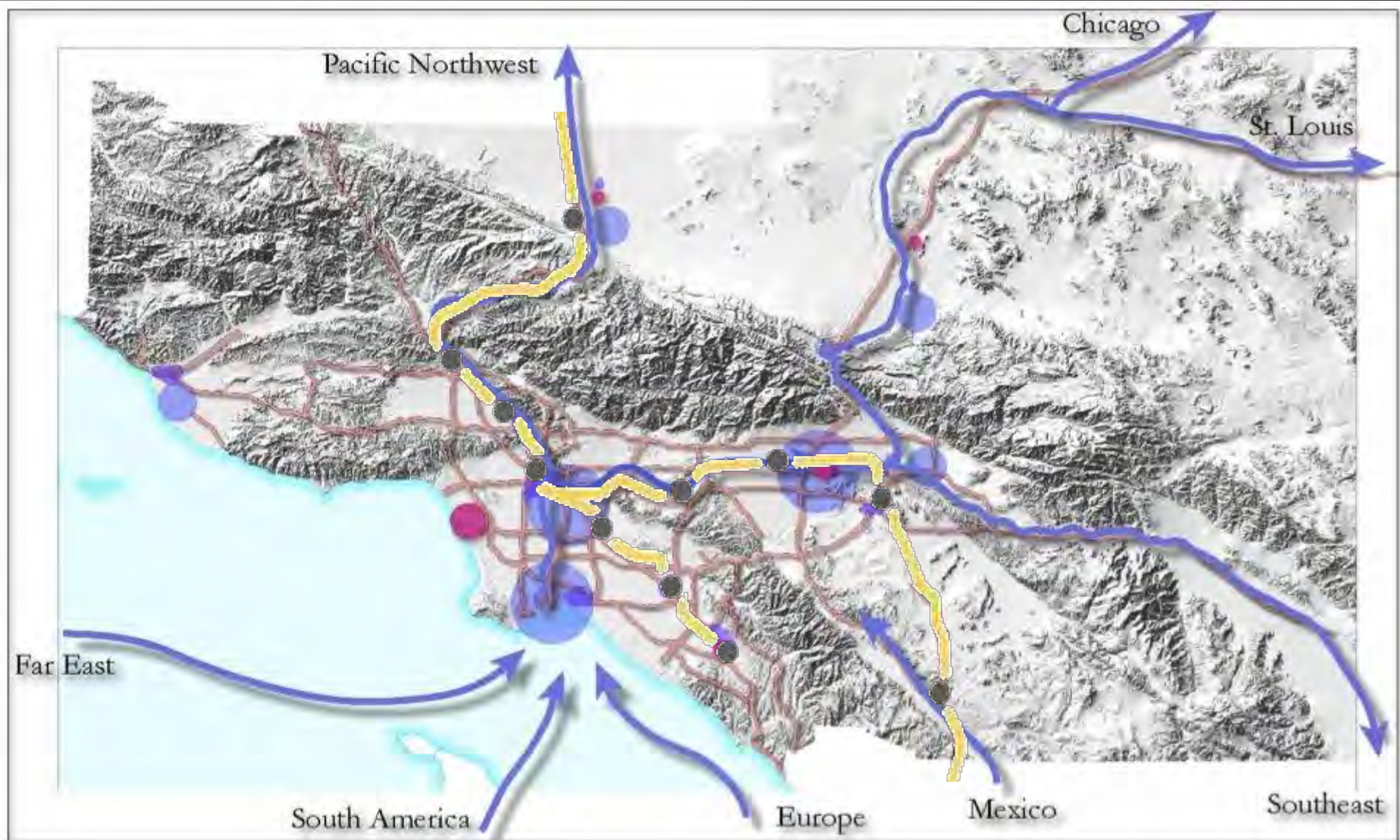




# Environmental Limits

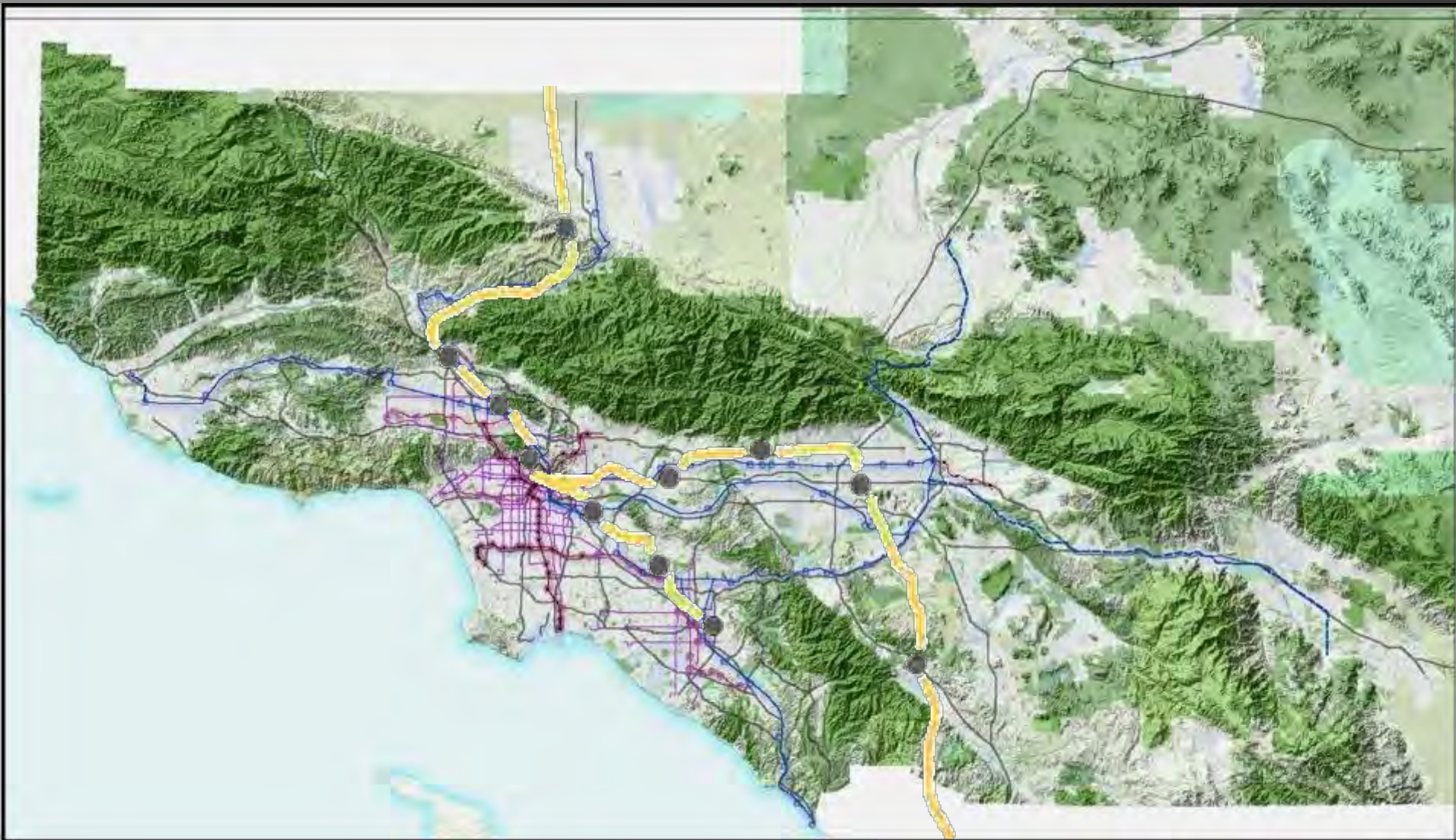


# Economic Structure



# Mobility

## Transit Systems



# All Rail and Rapid Bus Transit

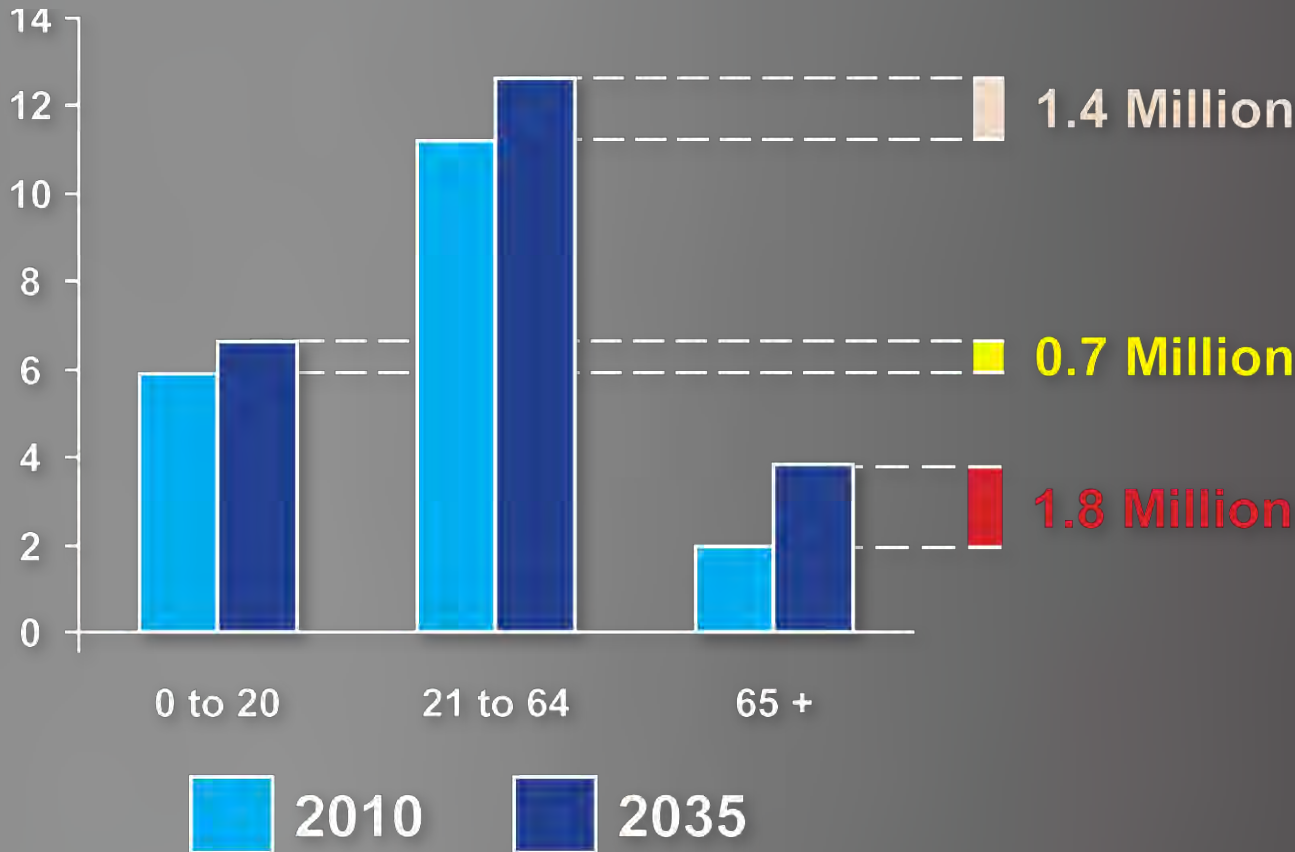


# Smart Growth



# Our Aging Population

SCAG Region, 2010 to 2035



## Seniors



Over  $\frac{1}{2}$   
the demand  
for new  
homes

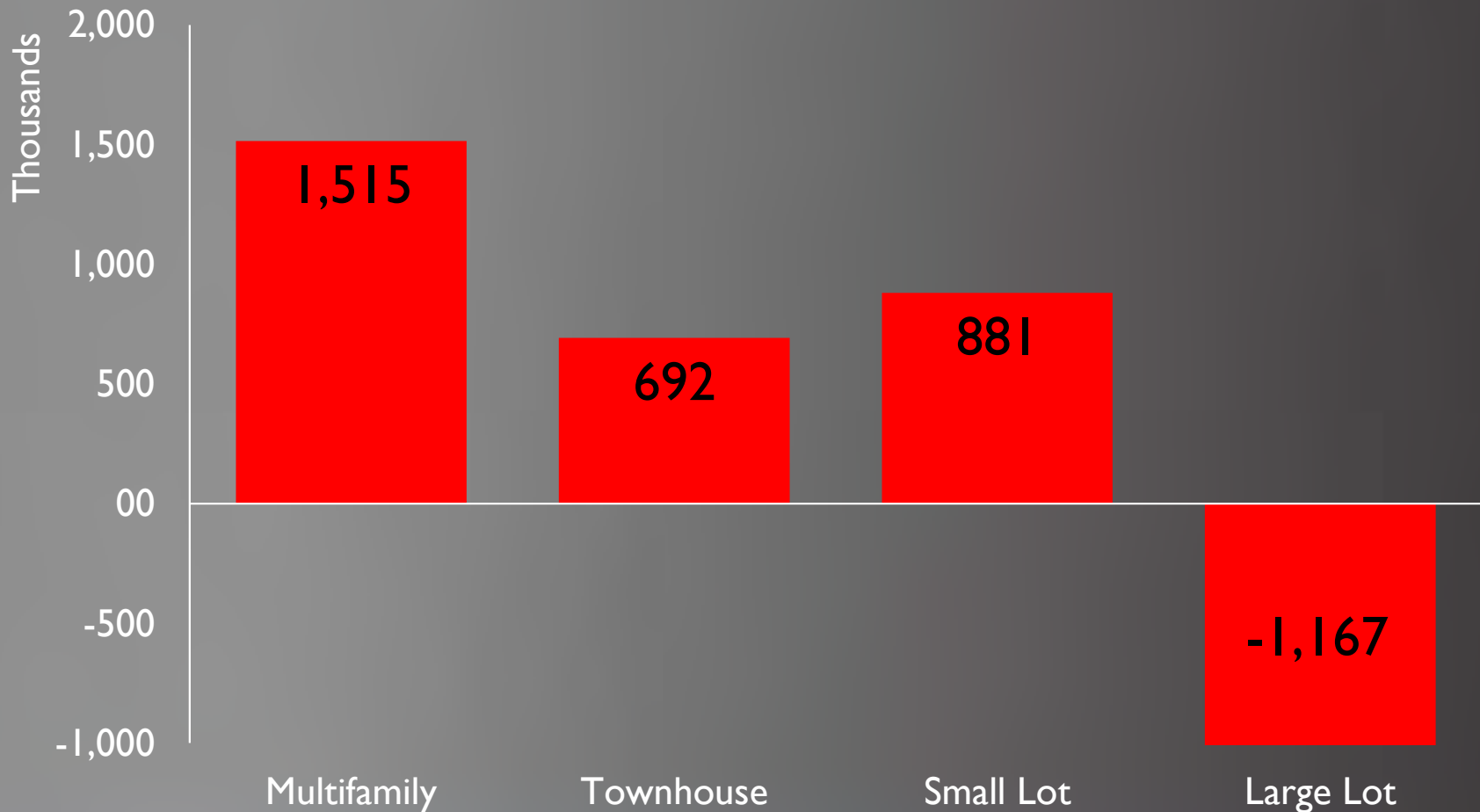
In 2040 **73%** of all  
households will be  
without children

Note: Percentages do not add to 100% due to rounding

Source: SCAG, Local Input/General Plan Growth Forecast, March 2010

# SCAG Housing Demand 2035

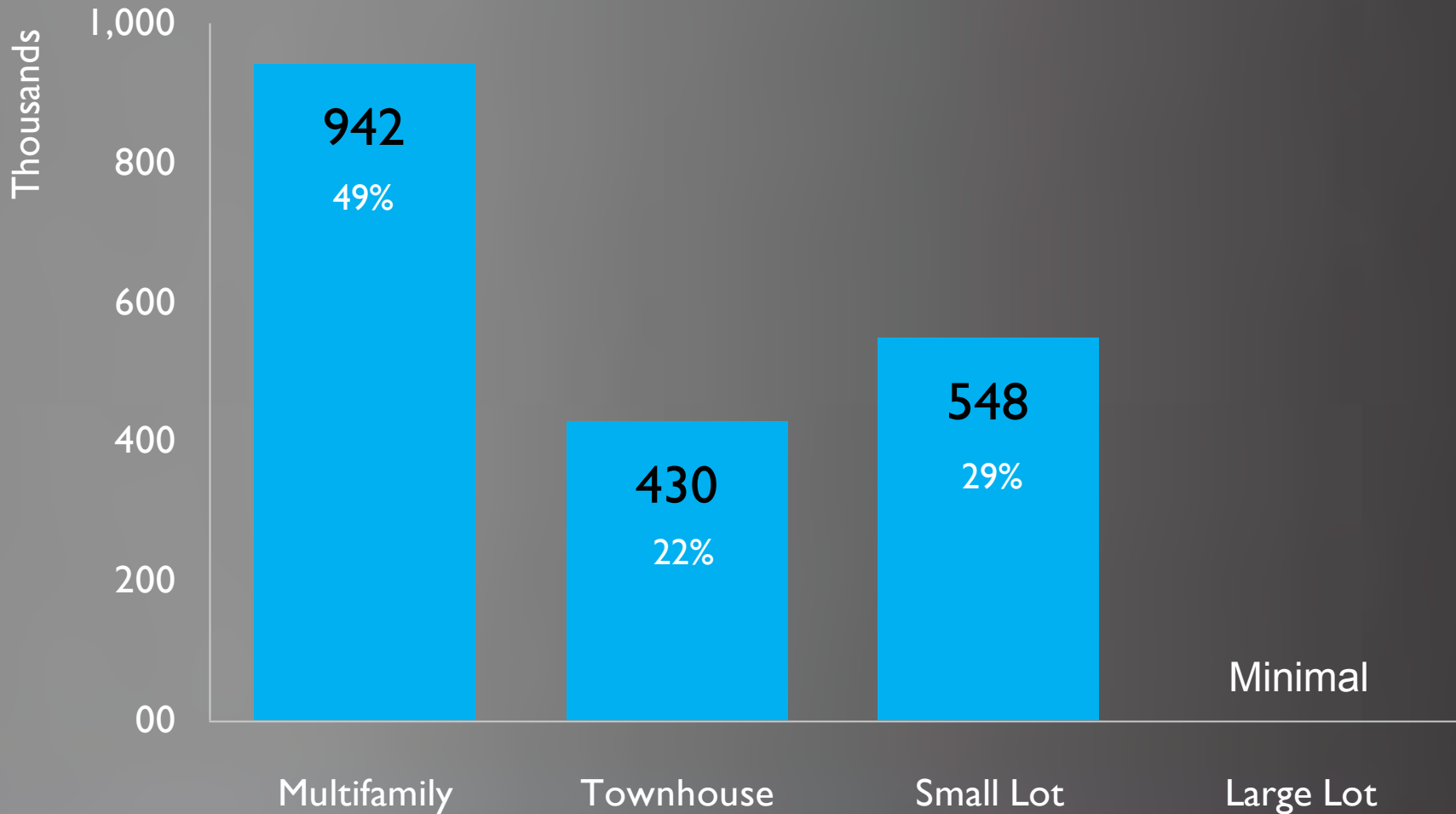
■ New Units Needed by 2035



# SCAG Planning **Bottom Line** 2035

■ New Units Needed by 2035

Holding Large Lot Supply Constant





# Southern California RapidFire

## 2012 RTP/SCS PUBLIC OUTREACH WORKSHOPS

### 2035 SCENARIO DESCRIPTIONS

#### DEVELOPMENT LOCATION



Dispersed Growth      Focused Development

#### COMMUNITY/ NEIGHBORHOOD DESIGN



Auto-Oriented      Walkable

#### HOUSING OPTIONS and MIX



Single-Family Subsidized      Multifamily

#### TRANSPORTATION INVESTMENTS



Roads / Highways      Transit and Non-Auto Strategies

### SCENARIO CONSIDERATIONS

The scenarios described here vary in their land use programs and patterns, and in the package of transportation investments that support the quality and location of growth in the scenarios. Ultimately, the RTP and SCS will also consider various transportation strategies and policies aimed at improving mobility while reducing vehicle miles traveled (VMT) and transportation emissions.

### PRICING EFFECTS

Fuel price, along with other driving costs, have both short and long-term effects on driving decisions. SCAG is working with our partners to explore how pricing could simultaneously impact driving decisions, reduce roadway congestion, support more efficient growth patterns, and raise revenue to support critical transportation system improvements – including those aimed at improving non-auto travel options such as transit, walking, and biking. Each of the scenarios described here assumes a hypothetical 2 cent per mile VMT charge, which on average, would result in a 2% reduction in total VMT.

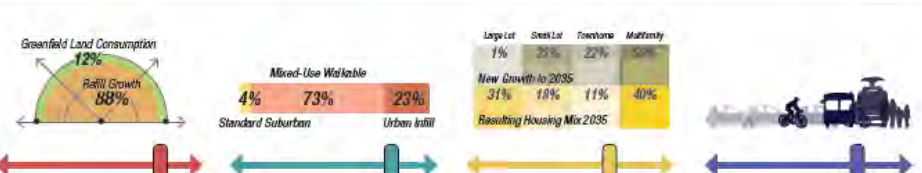
**1** This scenario is based on the general plans prepared by cities. It includes a significant proportion of suburban, auto-oriented development, but also recognizes the recent trend of increased growth in existing urban areas and around transit. New housing is mostly single-family, with an increase in smaller-lot, townhome, and multifamily homes; housing mix still falls short of demand for these types, though. Transportation investments may favor automobile infrastructure slightly, but also support new transit lines and other non-auto strategies and improvements.



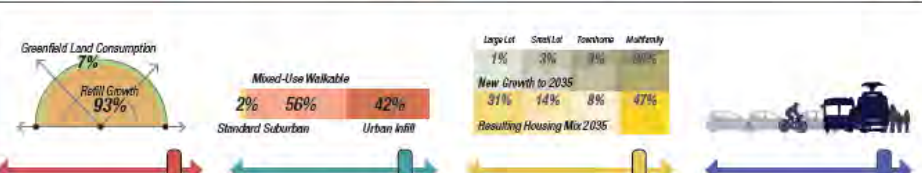
**2** This scenario focuses more growth in walkable, mixed-use communities and in existing and planned high-quality transit areas. It would see increased investments in transit and non-auto modes, with strategies to support growth patterns that are less auto-dependent. Employment growth is focused in urban centers around transit. This scenario strives to meet demand for a broader range of housing types, and new housing is weighted towards smaller-lot single family homes, townhomes, and multifamily condos and apartments.



**3** This scenario builds on the walkable, mixed-use focus of the growth in Scenario 2, and also aims to improve fiscal and environmental performance by shifting a portion of the region's growth into areas that are closer to transit, less auto-centric, and less intensive for building energy and water needs. Like Scenario 2, this scenario aims to meet demand for a broader range of housing types, with new housing weighted towards smaller-lot single family homes, townhomes, and multifamily condos and apartments.



**4** This scenario maximizes growth in urban and mixed-use configurations in already developed areas, and around existing and planned transit investments. To support this shift, transportation system investments are heavily weighted towards transit infrastructure and operational improvements, as well as improvements to bicycle and pedestrian infrastructure. Like Scenario 3, this scenario aims to improve environmental performance by shifting a portion of the region's growth into areas that are closer to transit, and have lower demands on building energy and water use.



### VEHICLE and FUEL POLICY

Meeting our greenhouse gas (GHG), pollutant emissions, and energy goals will include a suite of strategies and policies. In addition to the land use and transportation strategies explored in these first RTP/SCS scenarios, the efficiency of our cars and the fuels we use to power them will also play a role, as will the energy and water conservation measures for our homes and businesses. While these first scenarios focus on the impact of land use and transportation investments and strategies in meeting VMT, GHG, pollution, and energy challenges, subsequent analysis will explore the impacts of emerging vehicle technologies, renewable power generation, building measures, and a host of state, regional, and local environmental and energy policies.



# Development Proportions

New Growth 2008-2035



Suburban

Walkable

Infill

Standard

Mixed-Use

Urban

Lower Density  
Auto-Oriented  
Suburban

Mid-Density  
Walkable and/or  
Transit Oriented

Higher-Density  
Transit-Oriented  
Infill

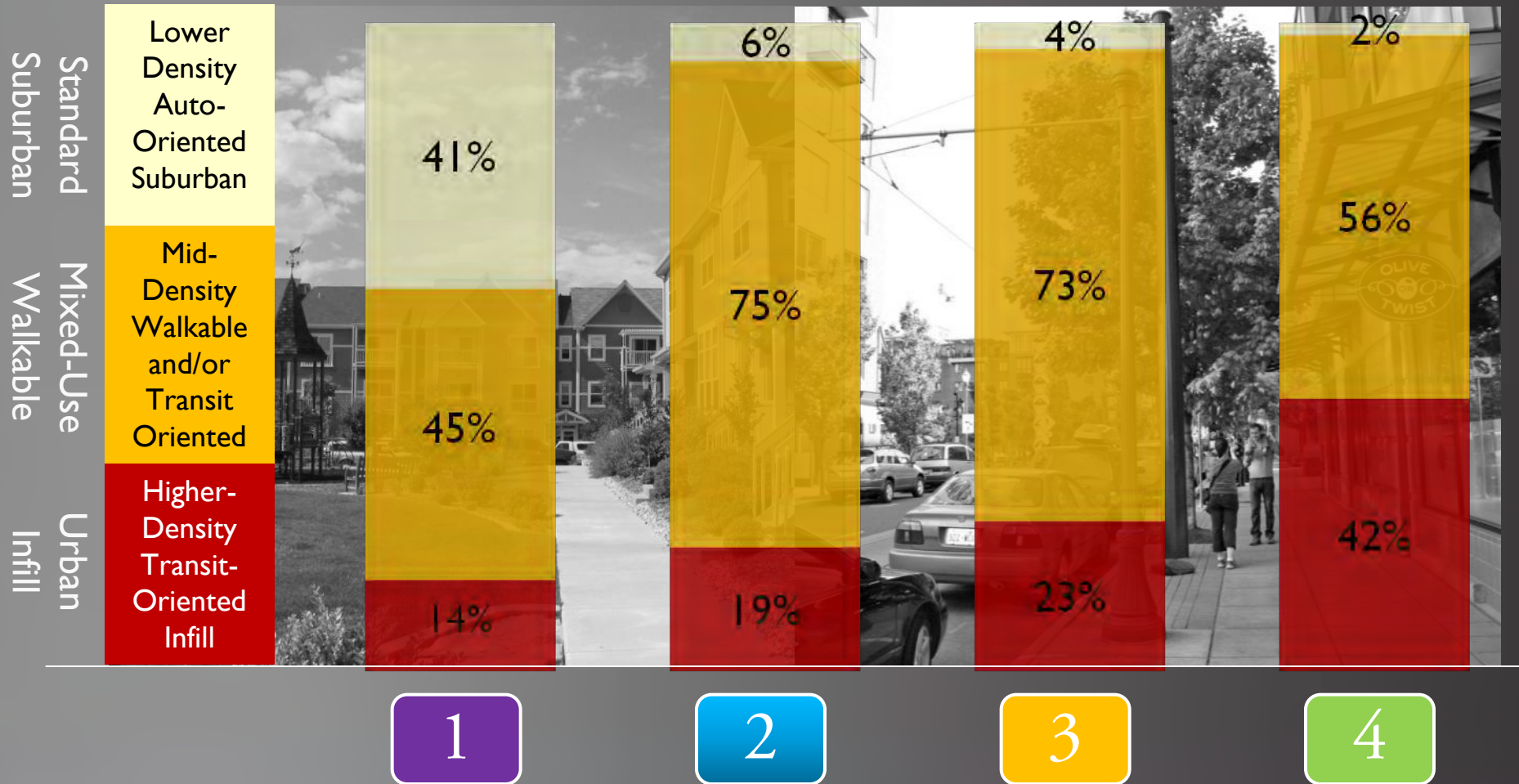


# Development Proportions

New Growth 2008-2035



■ Standard Suburban    
 ■ Mixed-Use Walkable    
 ■ Urban Infill



# Greenfield vs. Infill / Reuse

New Development 2008-2035



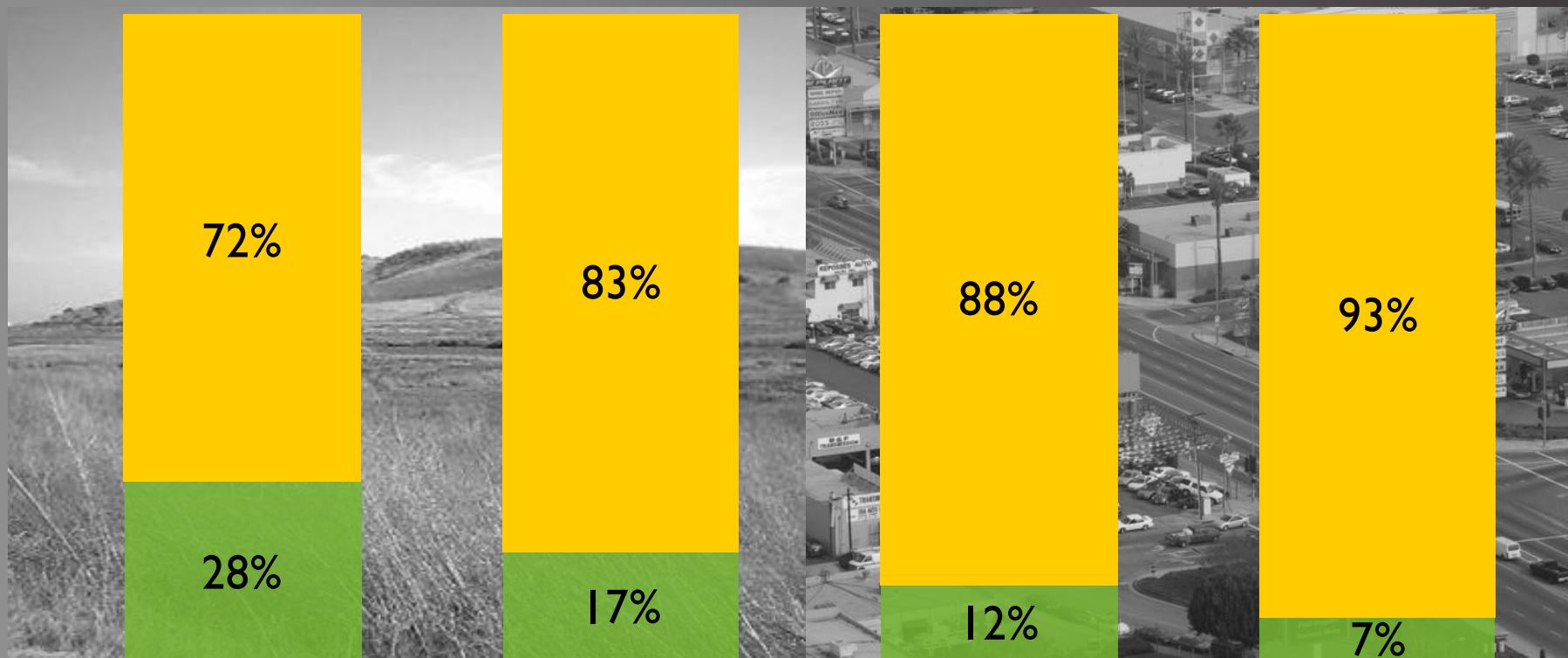
# Greenfield vs. Infill / Reuse

New Development 2008-2035



Greenfield

Reuse



1

2

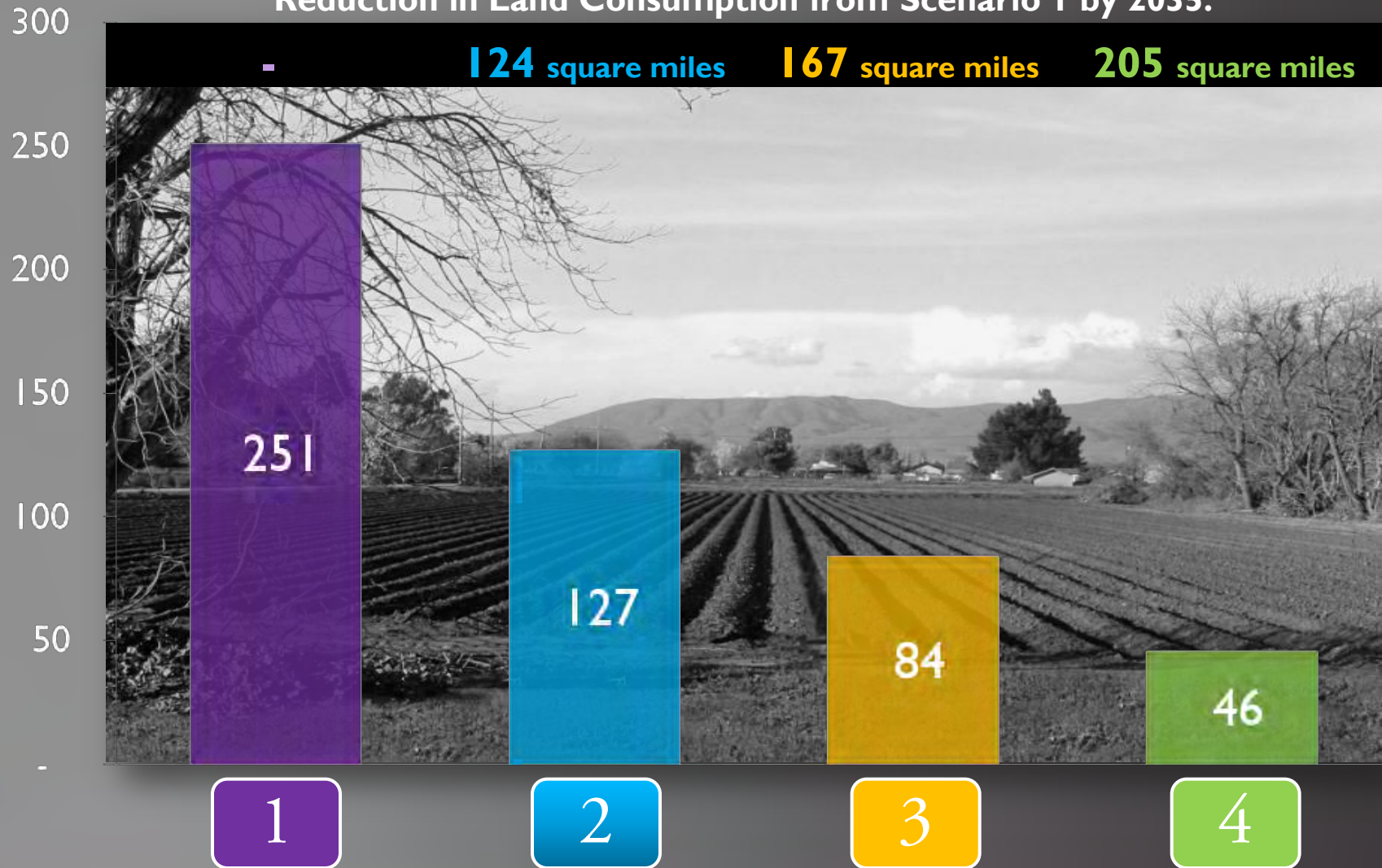
3

4

# Land Consumed

Square Miles

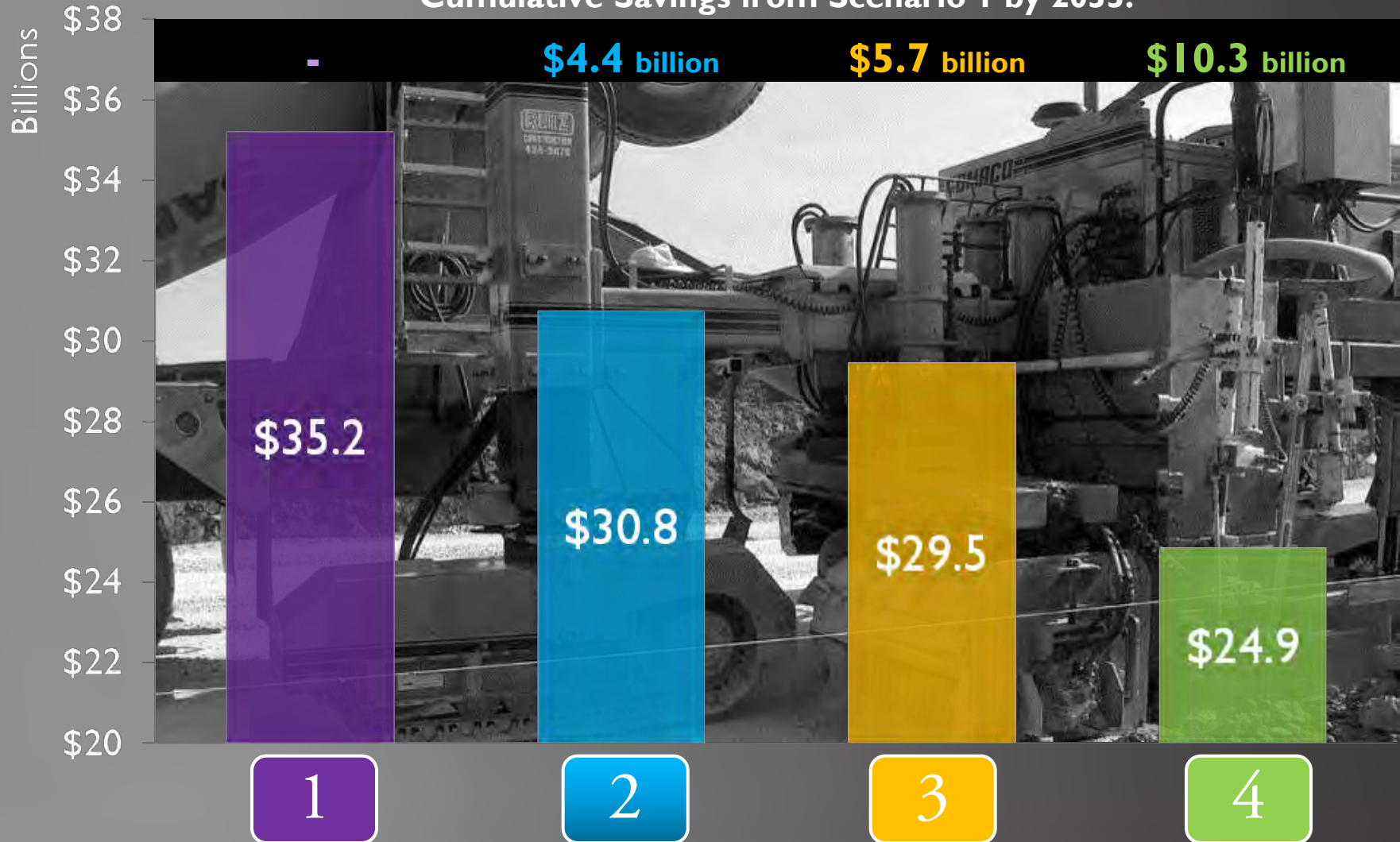
Reduction in Land Consumption from Scenario 1 by 2035:



# Local Infrastructure Costs

## Capital & Operations & Maintenance Costs for New Growth, 2008-2035

Cumulative Savings from Scenario I by 2035:

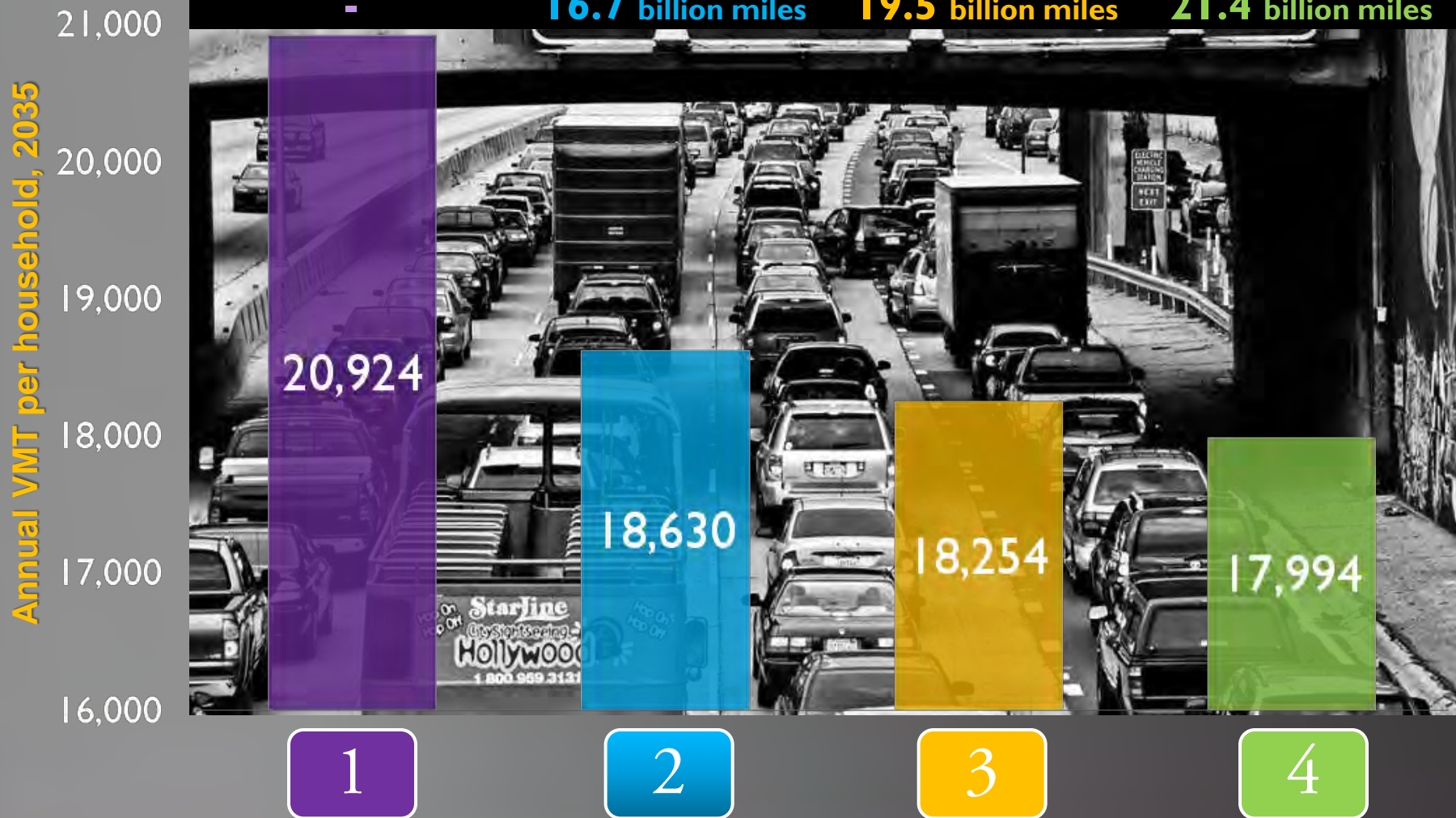


Includes capital costs and general fund O&M expenditures for local roads, wastewater and sanitary sewer, water supply, and parks & recreation

# Vehicle Miles Traveled

Annual per household, 2035

Annual Reduction in Total VMT from Scenario I in 2035:

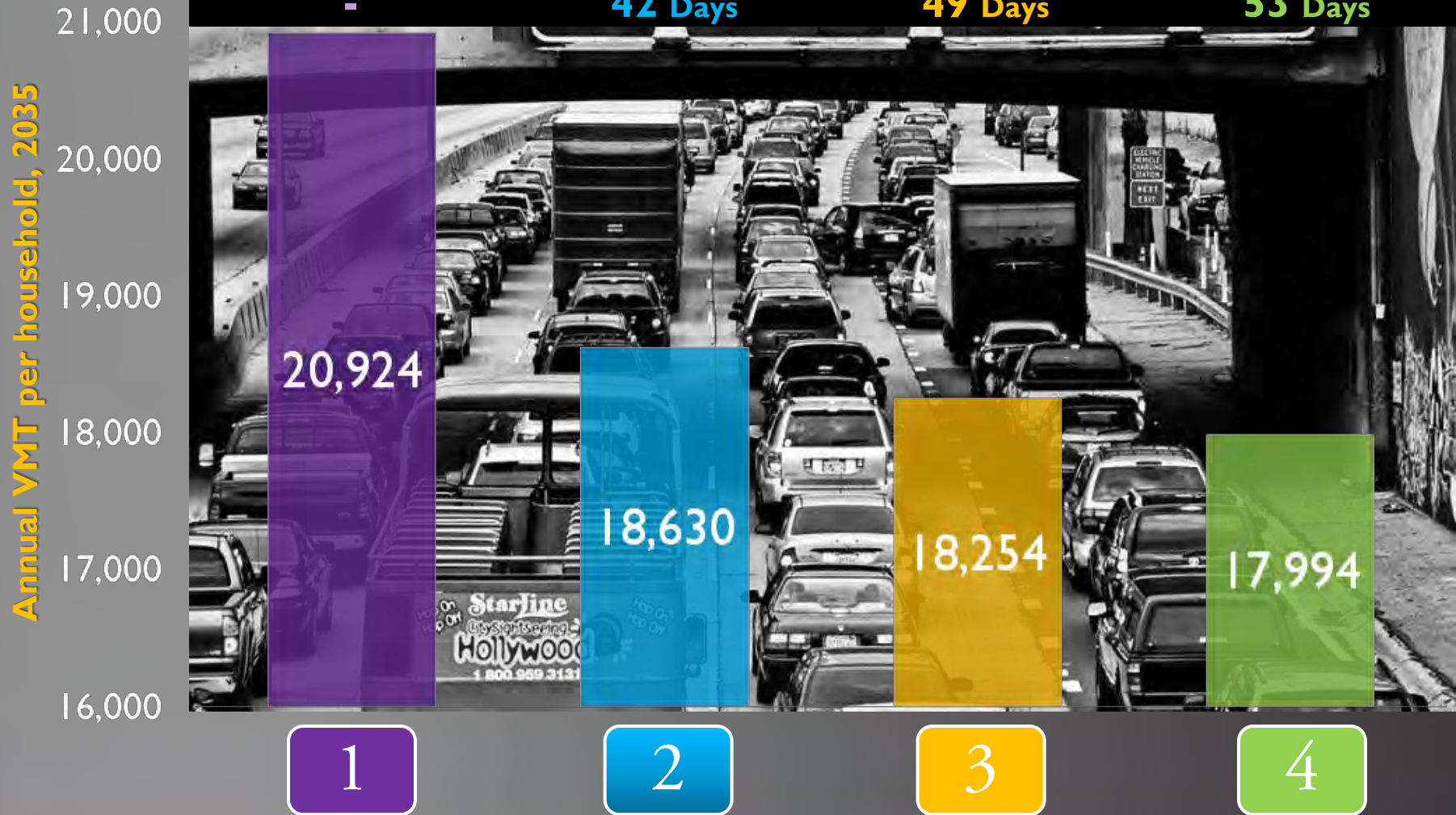




# Vehicle Miles Traveled

Annual per household, 2035

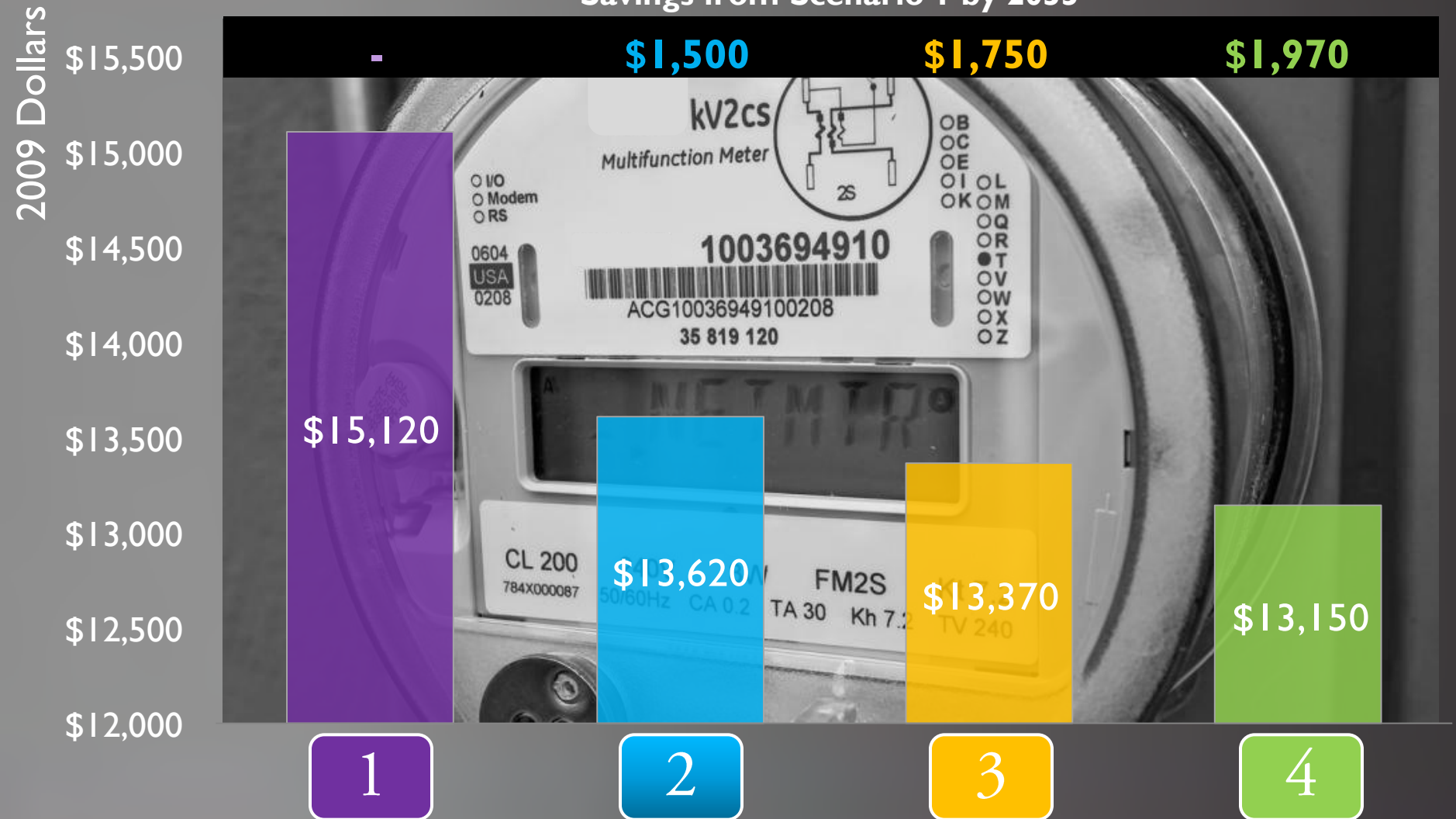
Equivalent to taking all cars off the road for **XX** work days in Southern CA:



# Household Costs

## Annual Costs for Transportation, Building Energy, and Water, 2035

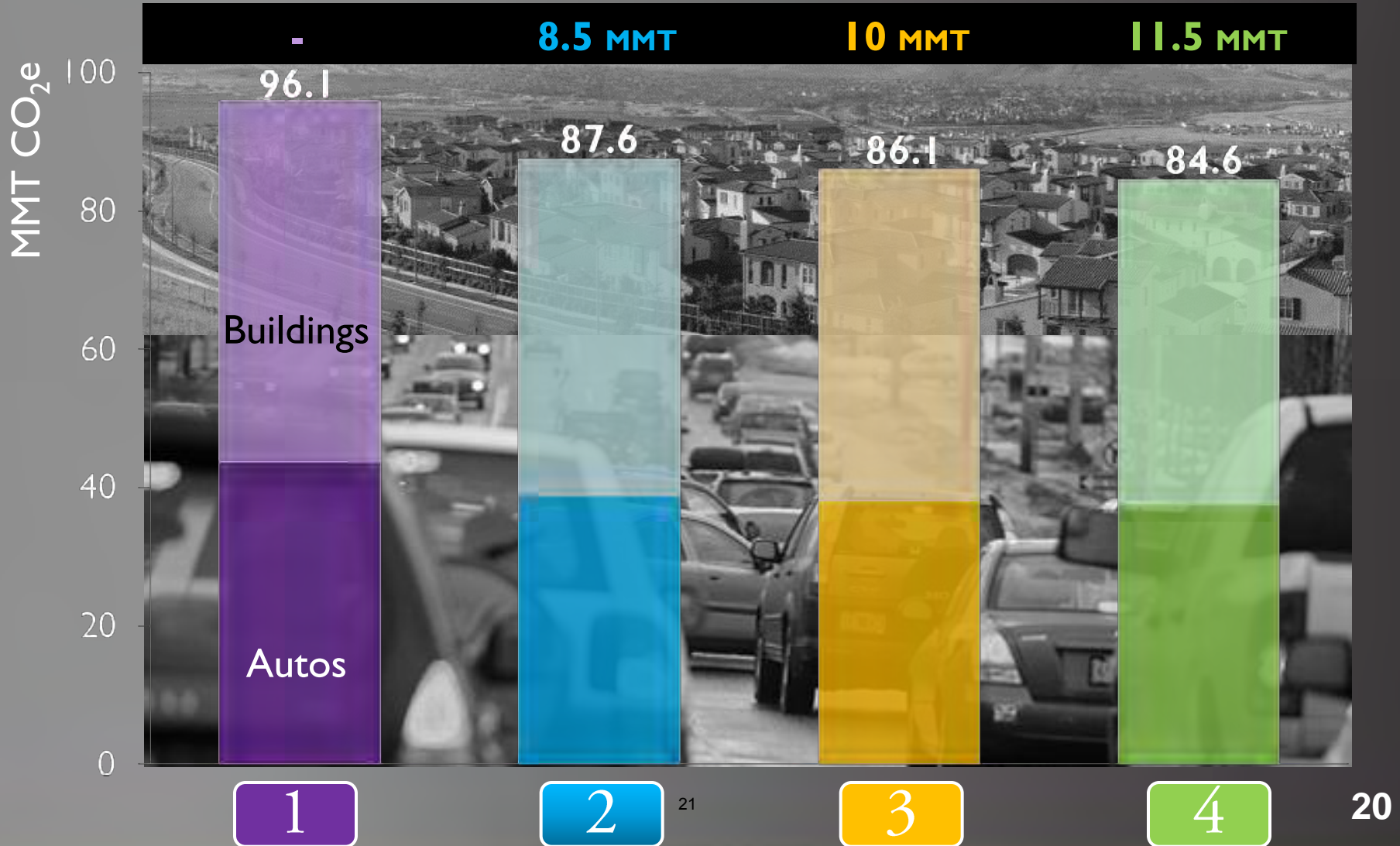
Savings from Scenario I by 2035



# Greenhouse Gas Emissions

Annual Emissions from Buildings and Auto Transportation, 2035

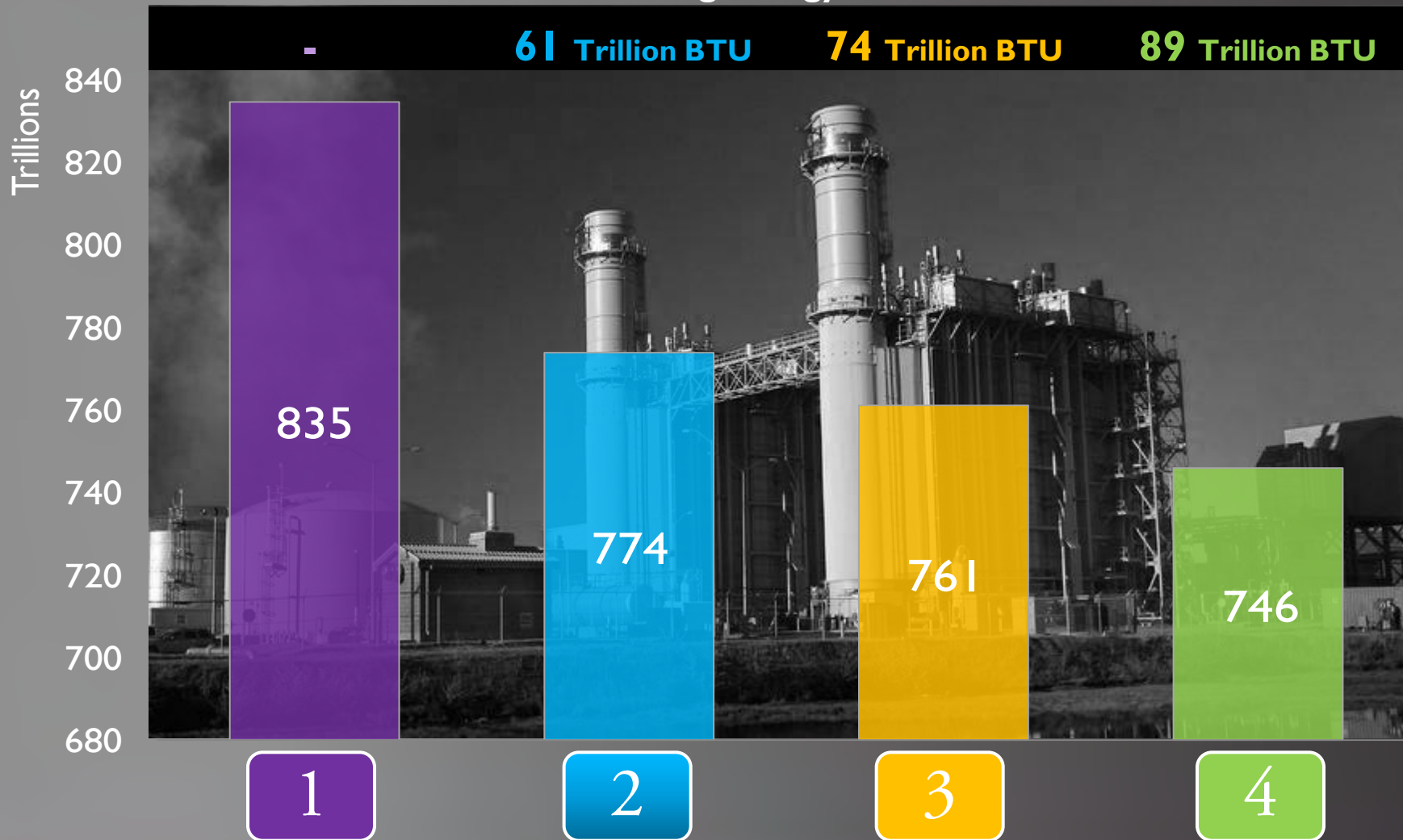
Reduction in GHG from Scenario 1 in 2035



# Building Energy Use

Trillion BTU, Annual, 2035

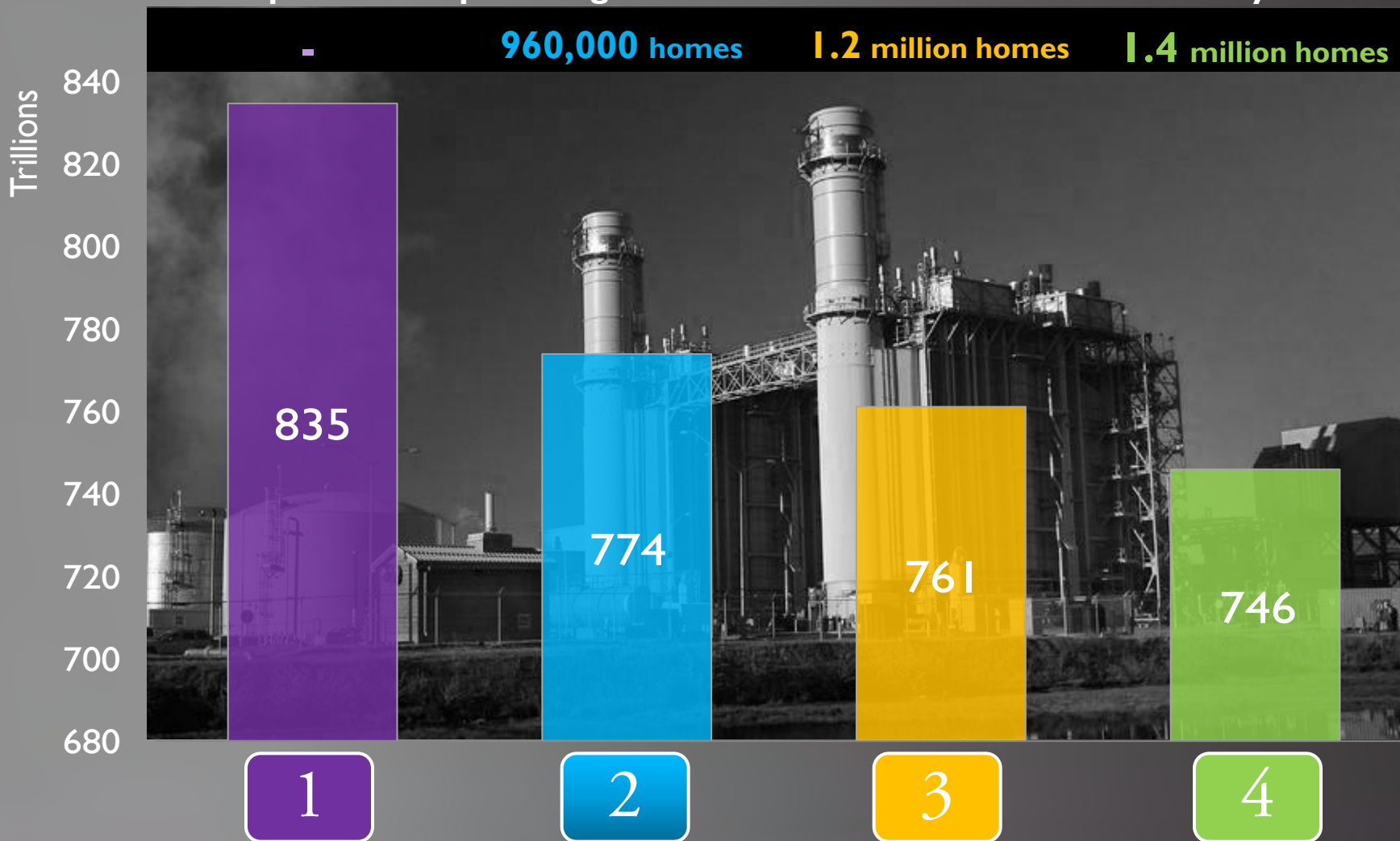
Annual Reduction in Building Energy Use from Scenario 1 in 2035:



# Building Energy Use

Trillion BTU, Annual, 2035

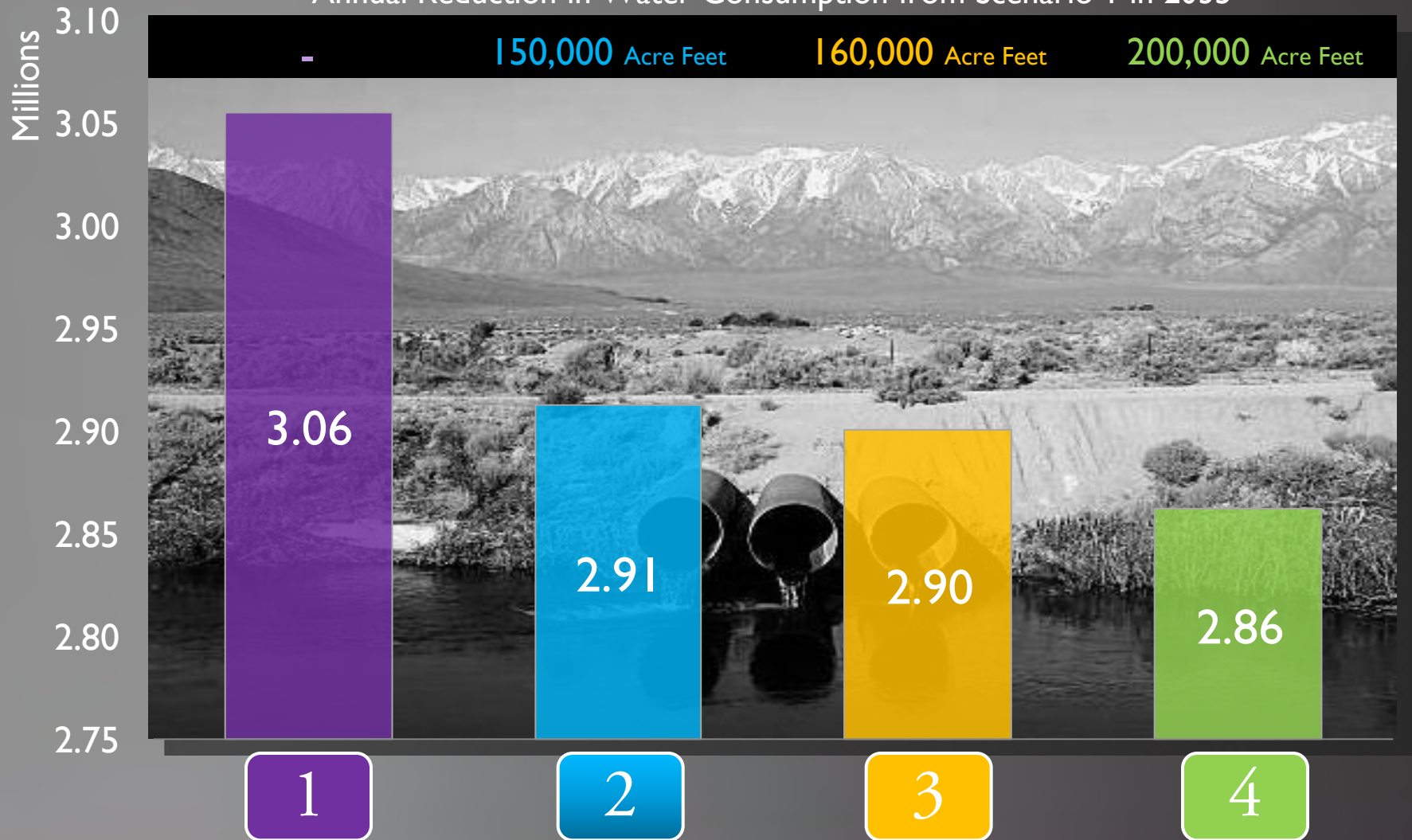
Equivalent to powering **XX** homes in Southern California for a year



# Water Consumption

Acre Feet (Annual in 2035)

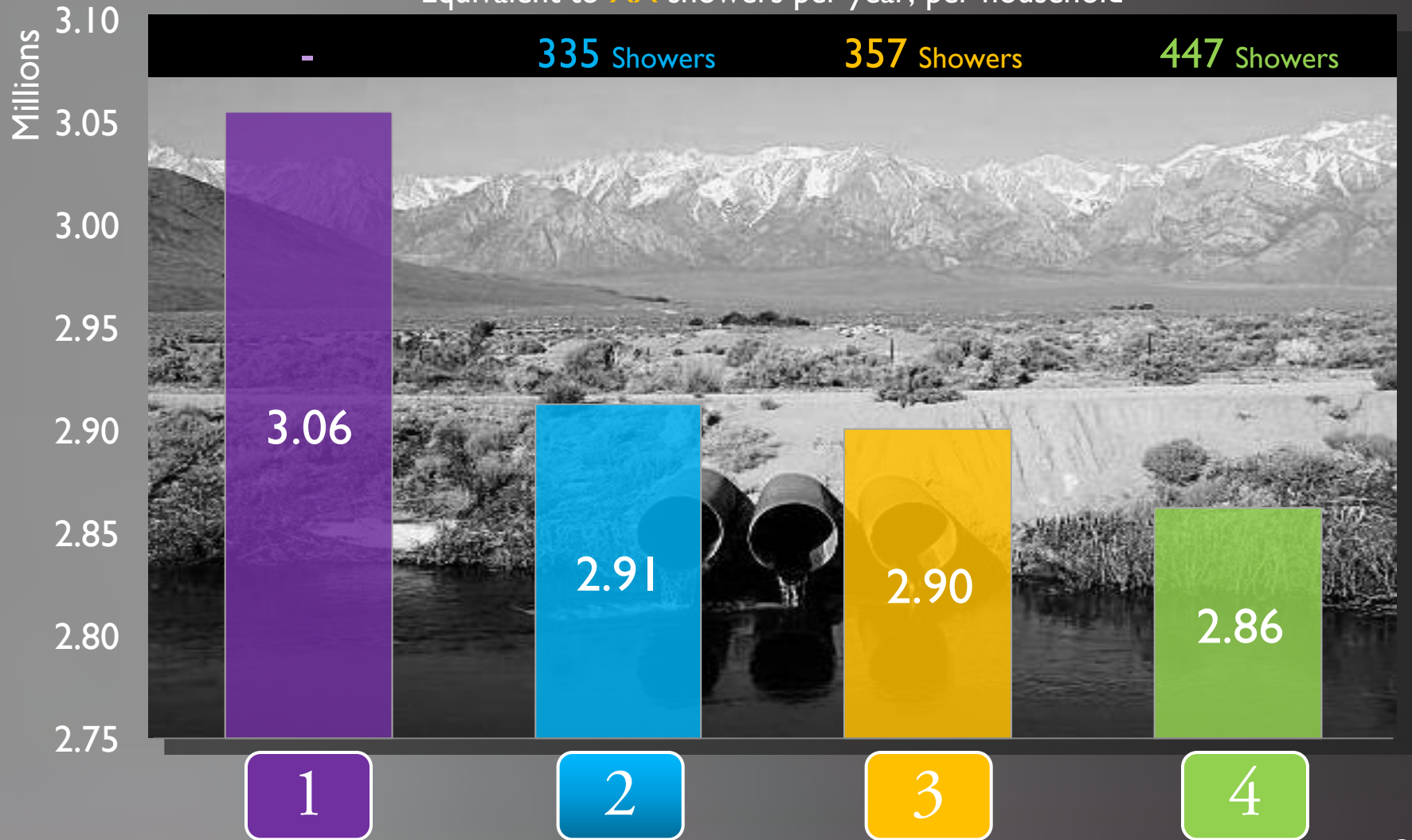
Annual Reduction in Water Consumption from Scenario 1 in 2035



# Water Consumption

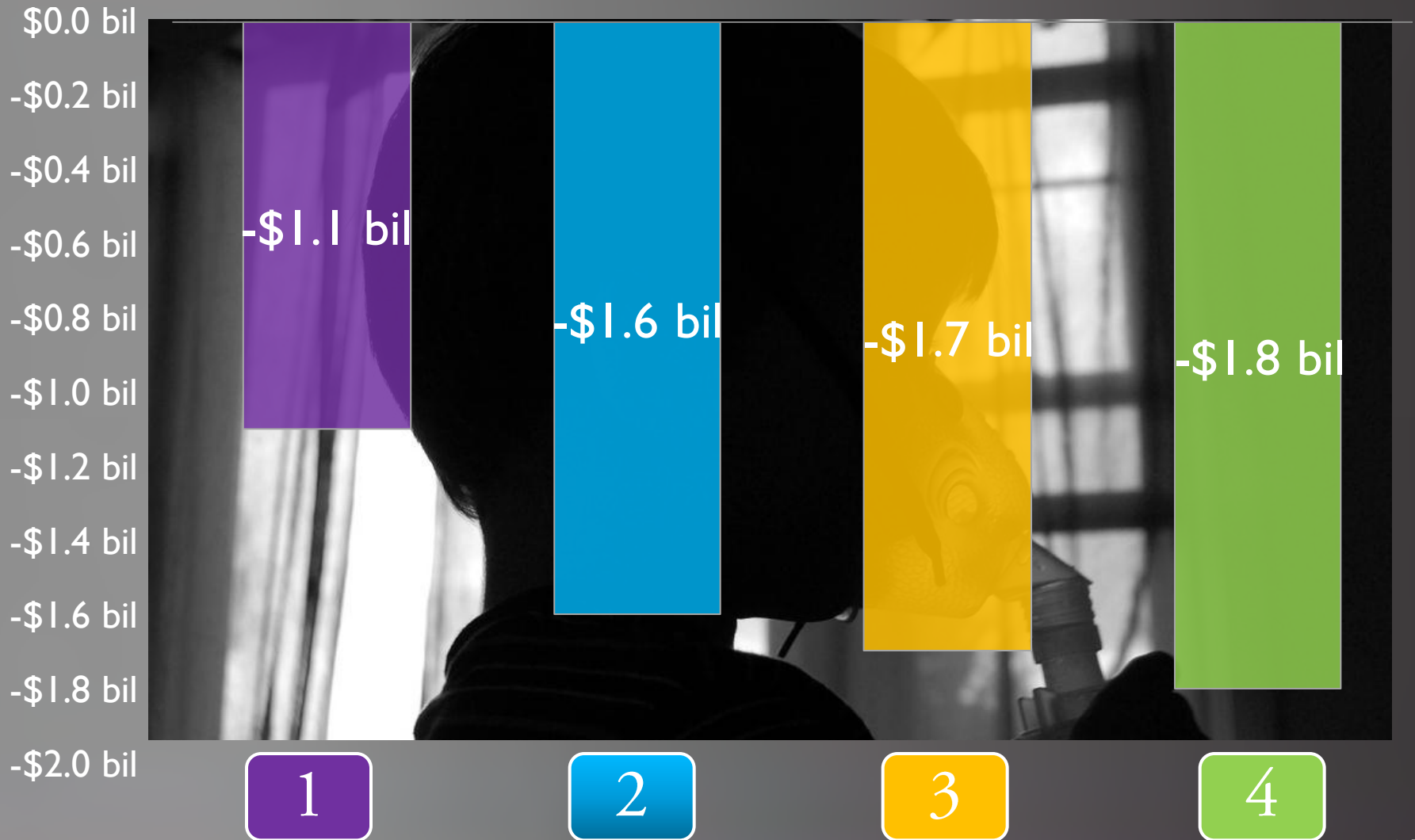
Acre Feet (Annual in 2035)

Equivalent to **XX** showers per year, per household



# Respiratory Health Impacts

Cost reduction from status quo due to health incidents, Annual in 2035





# Housing Product Mix

New Housing Units 2008-2035



# Housing Product Mix

New Housing Units 2008-2035



■ Multifamily     
 ■ Townhome     
 ■ Small Lot Single Family     
 ■ Large Lot



Anticipated Demand

1

2

3

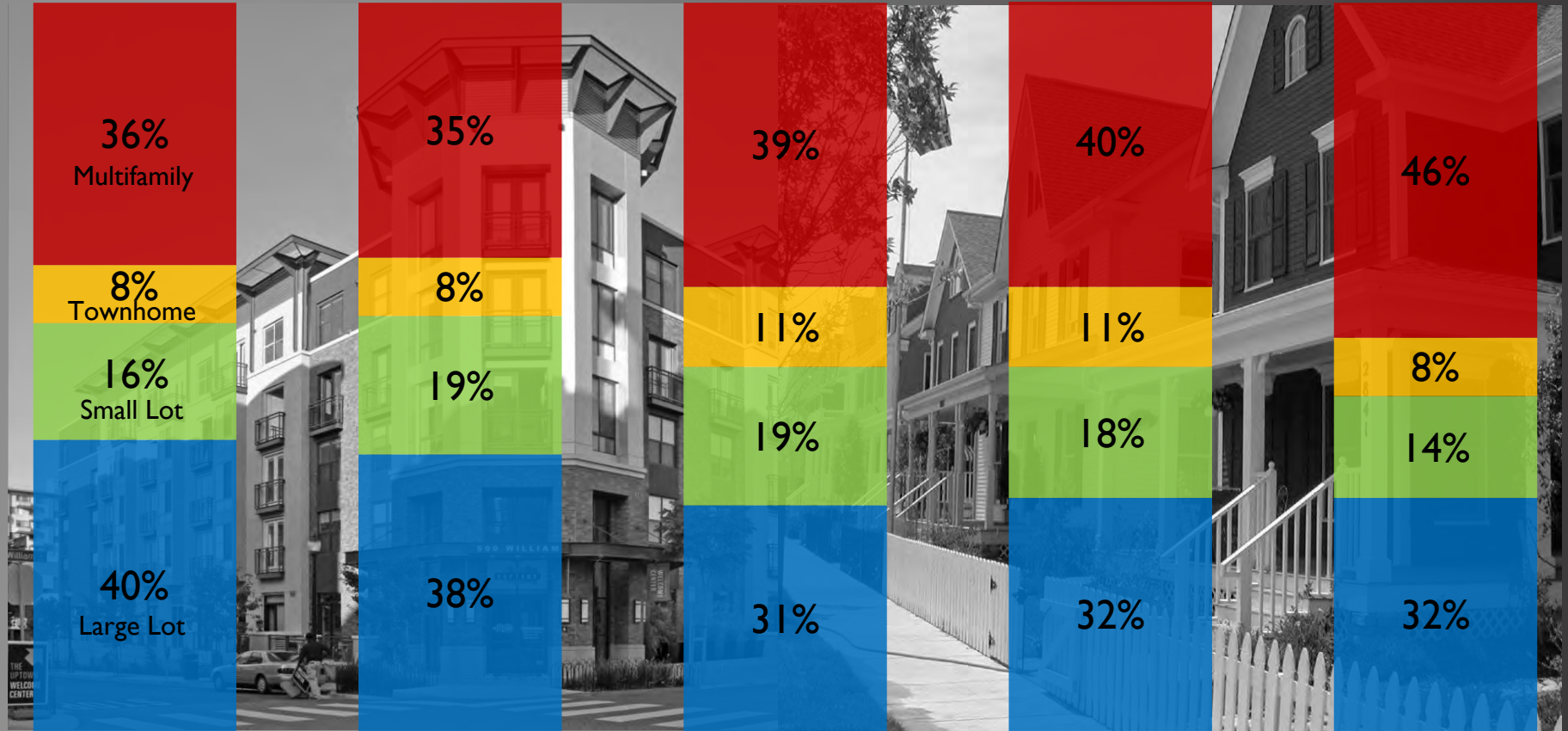
4

# Housing Product Mix

All Housing Units in 2035 (Existing + New)



■ Multifamily    
 ■ Townhome    
 ■ Small Lot Single Family    
 ■ Large Lot



Existing  
(2008)

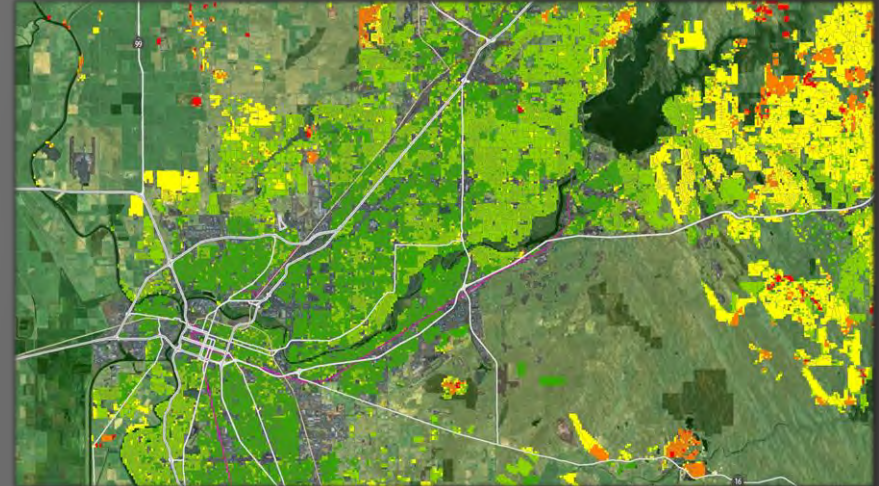
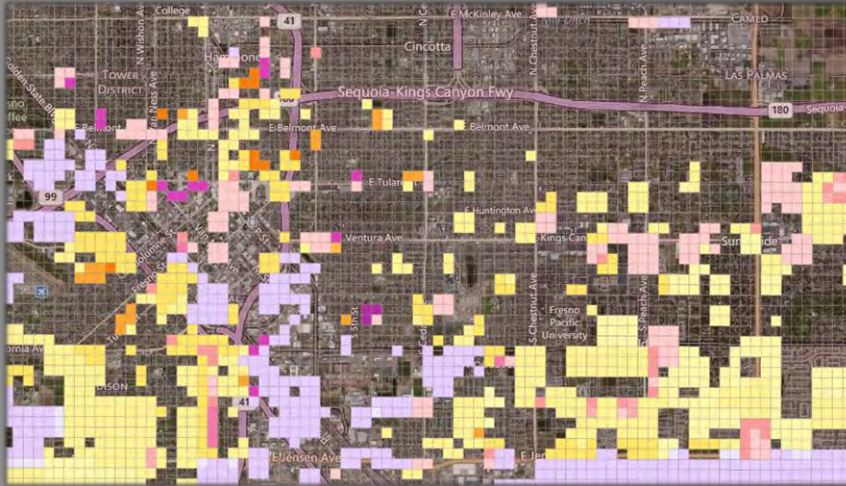
1

2

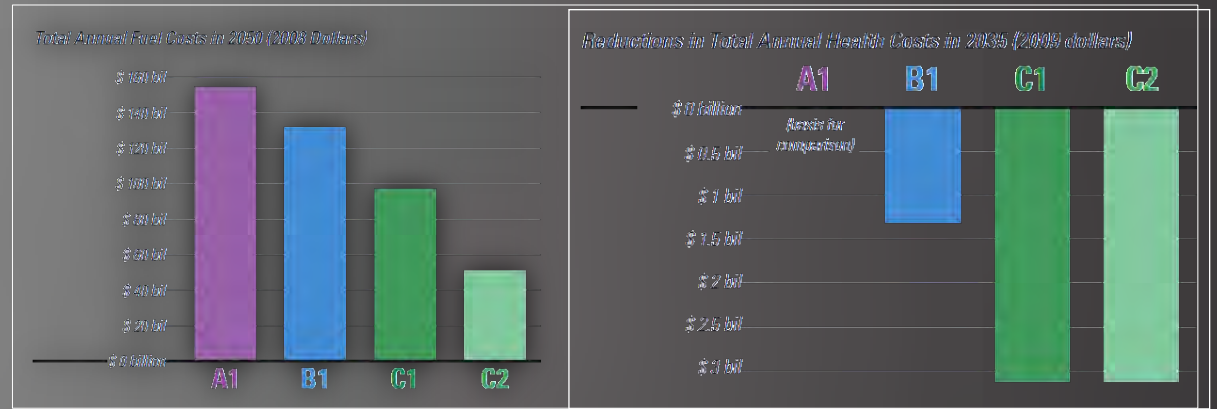
3

4

# New Scenario & Analytical Tools



*Next  
Generation  
Open Source  
Sketch Model &  
Data Ecosystem*





Climate Change

Health Care Costs

Failing Schools

Energy Security

Housing Costs

Budget Shortfalls

# Oahu's Challenges

Oil Dependency

Water Shortages

Energy Prices

Political Gridlock

Failing Infrastructure

Obesity

# Honolulu Transit Oriented Development Study

May 2012



Bowers + Kubota

Calthorpe Associates

Strategic Economics

The Pacific Resource  
PARTNERSHIP



# TOD Scenario Metrics...



Conceptual & Preliminary  
Scenario Modeling



## Environmental

- Greenhouse Gas Emissions
- Air Pollution
- Water and Energy Consumption

## Transportation

- Vehicle Miles Traveled
- Vehicle Emissions
- Rail Ridership

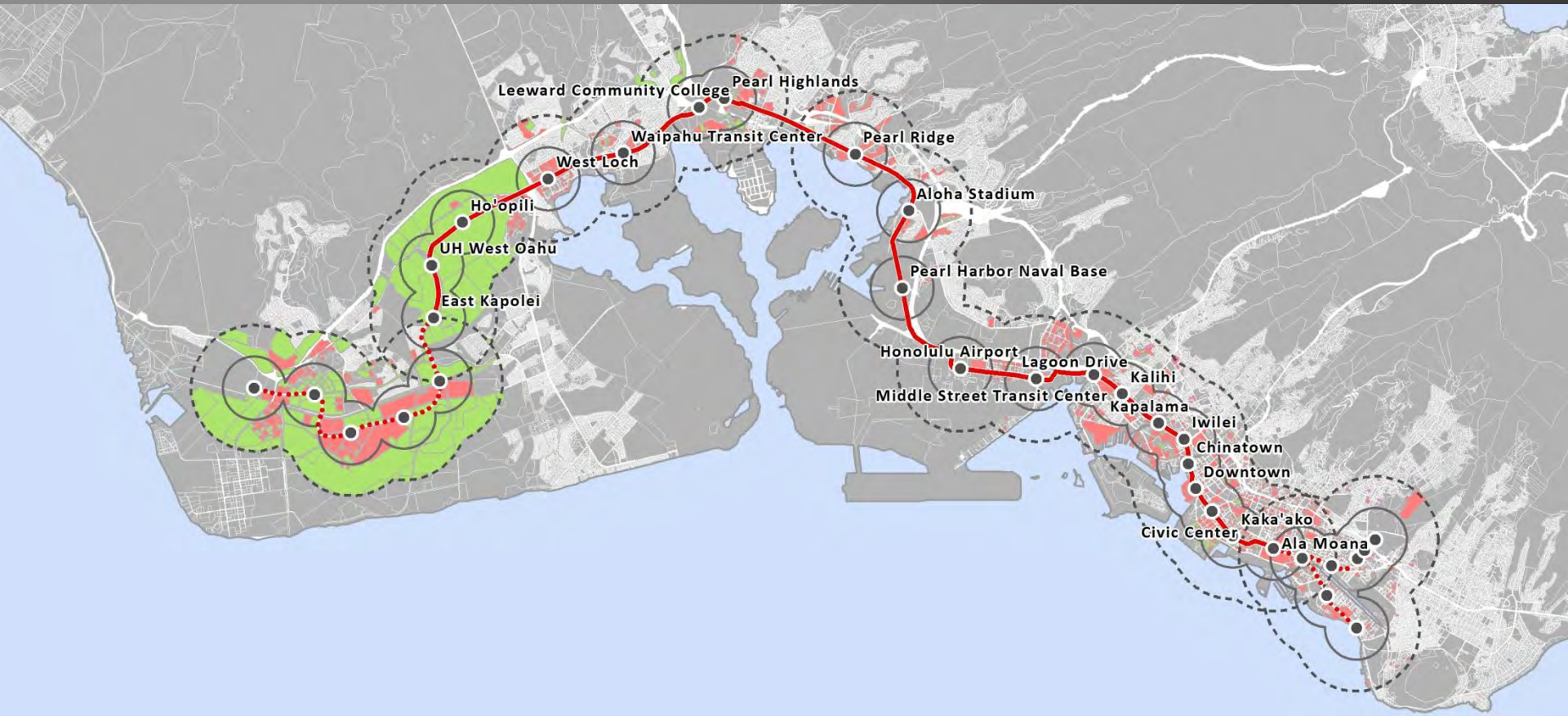
## Fiscal

- Capital Infrastructure Costs
- O&M/Public Works Costs
- Household/Business Costs

## Social

- Housing Diversity & Affordability
- Cost of Living Household Costs

# Greenfield and Infill





# Web-Based Scenario Painting

footprint.calthorpe.com/main/site/scenario/4/painting-fullscreen

Active PlaceType: Apply PlaceType Erase Revert to Original PT Undo Last Edits Clear Paint Action Placetypes Menu

Grid Transparency slider:

PTID	Placetype Name	Color
1	Urban Mixed Use	Dark Red
2	Urban Residential	Red-Orange
3	Urban Commercial	Orange
4	City Mixed Use	Light Orange
5	City Residential	Yellow-Orange
6	City Commercial	Yellow
7	Town Mixed Use	Light Yellow
8	Town Residential	Light Green
9	Town Commercial	Light Blue
10	Village Mixed Use	Light Purple
11	Village Residential	Light Blue
12	Village Commercial	Light Green
13	Neighborhood Residential	Light Green
14	Neighborhood Low	Light Green
15	Office Focus	Light Green
16	Mixed Office and R&D	Light Green
17	Office/Industrial	Light Green
18	Industrial Focus	Light Green
19	Low-Density Employment Park	Light Green
20	High Intensity Activity Center	Light Green
21	Mid Intensity Activity Center	Light Green
22	Low Intensity Retail-Centrec	Light Green
23	Retail: Strip Mall/ Big Box	Light Green
24	Suburban Multifamily	Light Green
25	Suburban Mixed Residential	Light Green
26	Residential Subdivision	Light Green
27	Large Lot Residential Area	Light Green
28	Rural Residential	Light Green
29	Rural Ranchettes	Light Green
30	Rural Employment	Light Green
31	Campus/ University	Light Green
32	Institutional	Light Green
33	Parks & Open Space	Light Green

Base Layer:  Bing Hybrid  Bing Road  Bing Aerial  MapQuest Open Aerial Tiles  MapQuest-OSM Tiles

Overlays:  Base Year Placetypes  Grid  Station Areas - One Mi  Station Areas - Half Mi  Editable

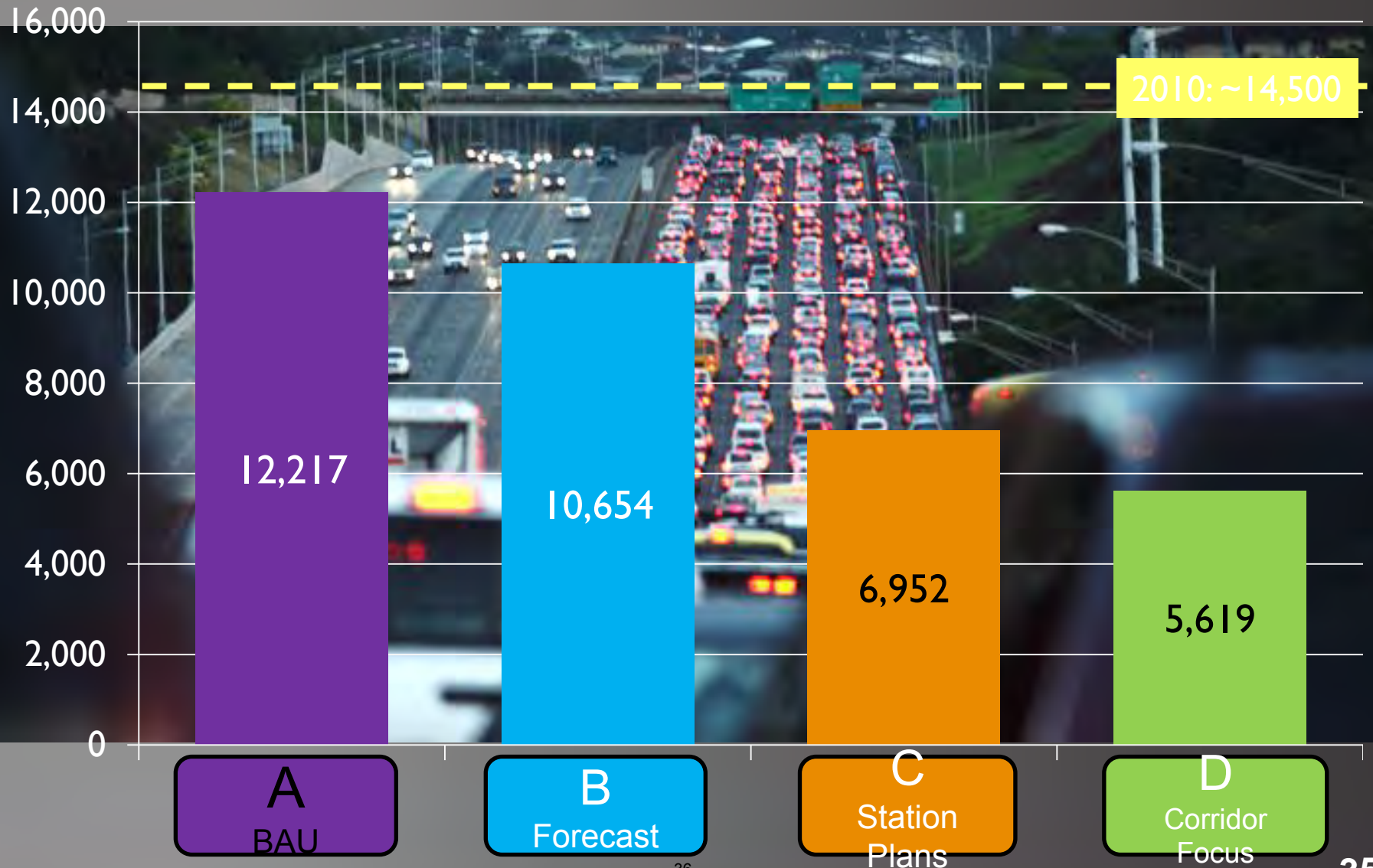
Page 1 of 0

4:00 PM

# Household Driving

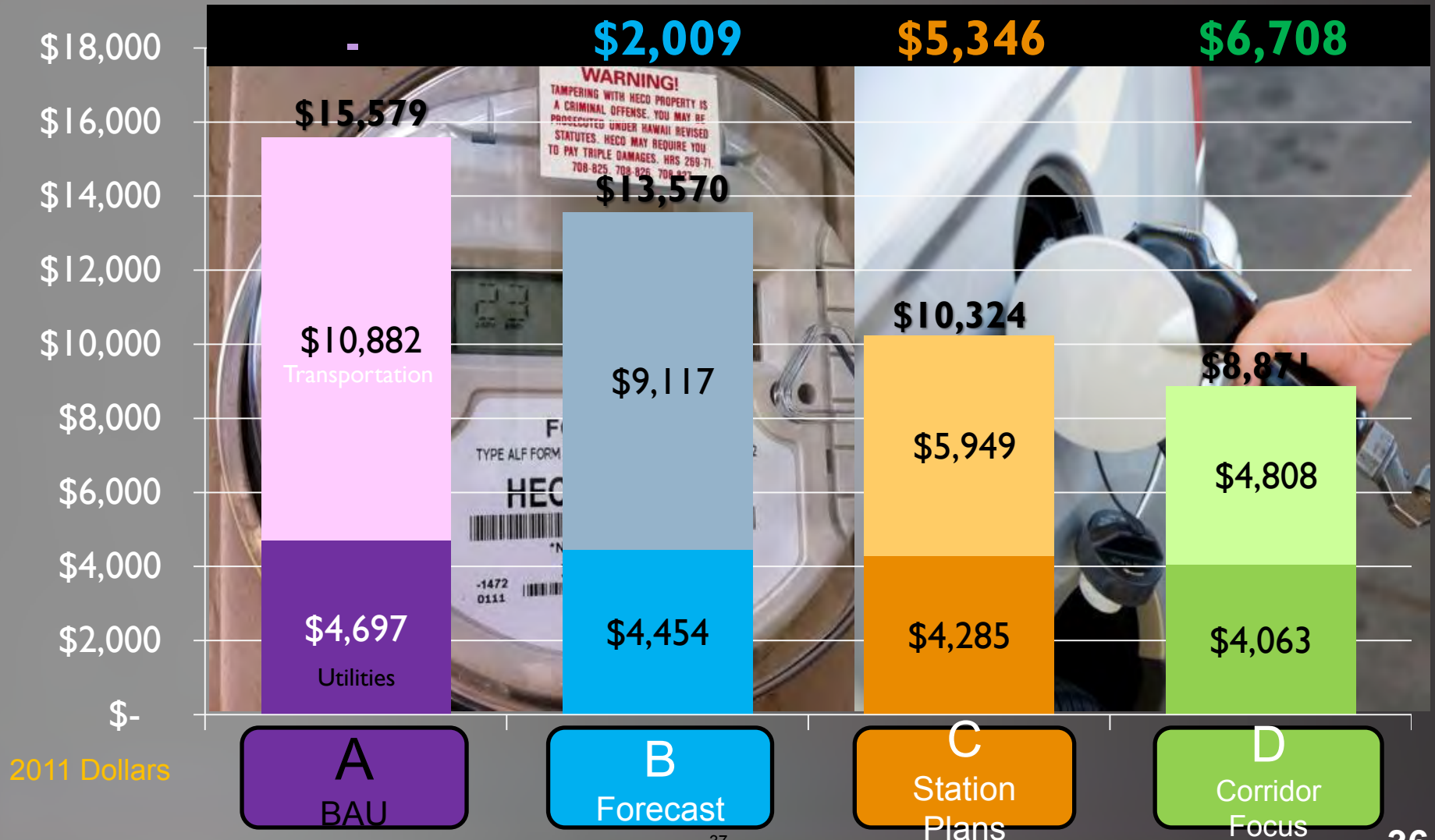
*Increment Only Passenger Vehicles, Annual (2050)*

VMT per HH



# Per Household Costs - *Increment*

Transportation and Home Energy/Water Use, Annual (2050)

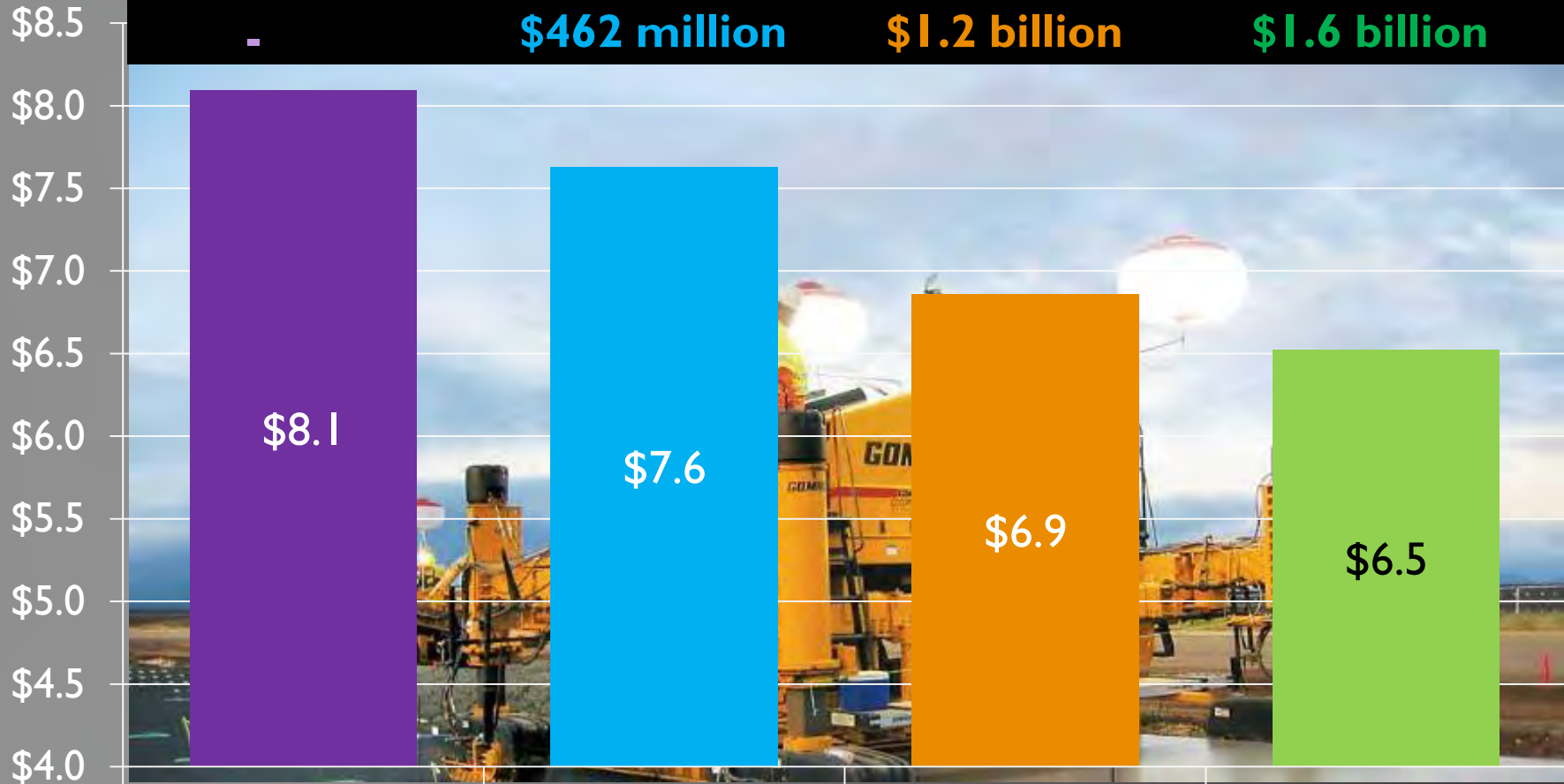


# Local Infrastructure Costs

Capital and Operations & Maintenance Costs, 2010-2050

\$ Billions

*Cumulative Reduction from Scenario A by 2050*



2011 Dollars

**A**  
BAU

**B**  
Forecast

**C**  
Station  
Plans

**D**  
Corridor  
Focus

# Roadway Costs

## Cost for Additional Highway and Arterial Roadways (2010-2050)

\$ Billions

\$10.0  
\$9.0  
\$8.0  
\$7.0  
\$6.0  
\$5.0  
\$4.0  
\$3.0  
\$2.0  
\$1.0  
\$0.0



2011 Dollars

**A**  
BAU

**B**  
Forecast

**C**  
Station  
Plans

**D**  
Corridor  
Focus

# Preliminary Rail Ridership

Trips Per Day (2035 – MOS/Phase I Rail )

