



# UCLA Business-Related Air Travel Carbon Mitigation

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2018 – 2020 Pilot Program

**UCLA**

# Air Travel as Part of UC Climate Commitments

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- The University recognizes the challenges of climate change and has made commitments to reduce emissions:
  - Carbon neutrality by 2025 for Scopes 1 & 2 (stationary sources and vehicle fleet)
  - Mobile sources—Scope 3—while not yet included for 2025, there is heavy focus on reducing these emissions
- How do we continue to pursue our mission while honoring our commitment to reduce greenhouse gas emissions?
- UC Sustainable Practices Policy Procedures state:
  - “The University will pursue strategic programs and data collection to offset greenhouse gas emissions related to business-related campus air travel”
  - *Recognizing the UC commitment to reducing or offsetting air travel greenhouse gas (GHG) emissions, UCLA launched its Air Travel Mitigation Pilot Program on January 1, 2018*

# Why Offset or Mitigate Air Travel Emissions?

- Air travel by faculty and staff is necessary for the University to pursue and fulfill its mission and has no viable alternative for many trips
- Air travel GHG emissions are significant, accounting for 5% of the total at UCLA (greater than emissions from its vehicle fleet!)

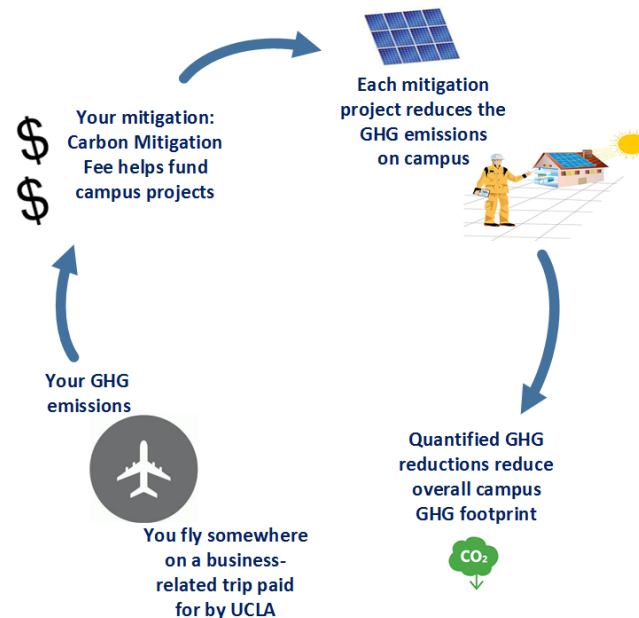
**GHG Emissions (2014)**

| Campus        | Percent from air travel |
|---------------|-------------------------|
| Berkeley      | 15%                     |
| Davis         | 5%                      |
| Irvine        | 18%                     |
| Los Angeles   | 5%                      |
| Merced        | 7%                      |
| Riverside     | 5%                      |
| San Diego     | 7%                      |
| San Francisco | 9%                      |
| Santa Barbara | 30%                     |
| Santa Cruz    | 13%                     |



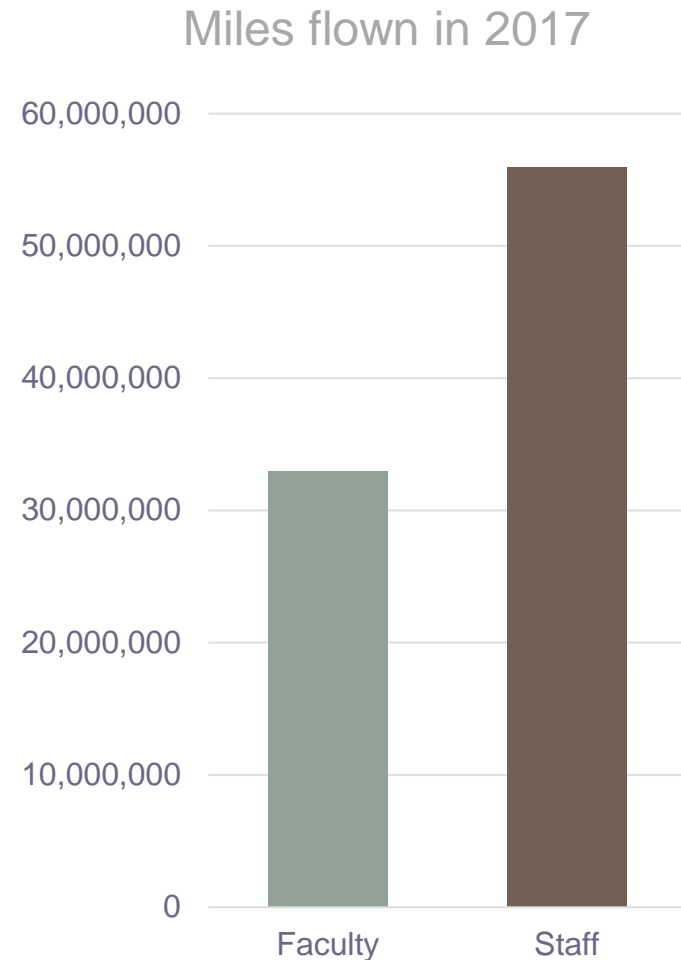
# Move to Action

- Carbon offsets are not *preferred* for GHG emissions reduction
- But for air travel, they do make sense



# Who at UCLA Is Doing the Flying?

- While faculty are but one-sixth of the UCLA workforce, they fly much more per capita than staff

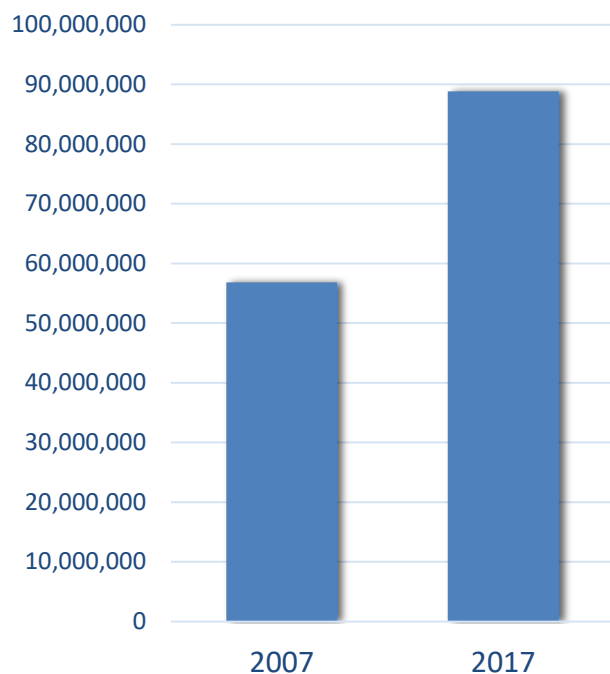


# How Substantial are UCLA's Business-Related Air Travel GHG Emissions?

## Miles flown per year

2007 Miles Flown: 56,837,237

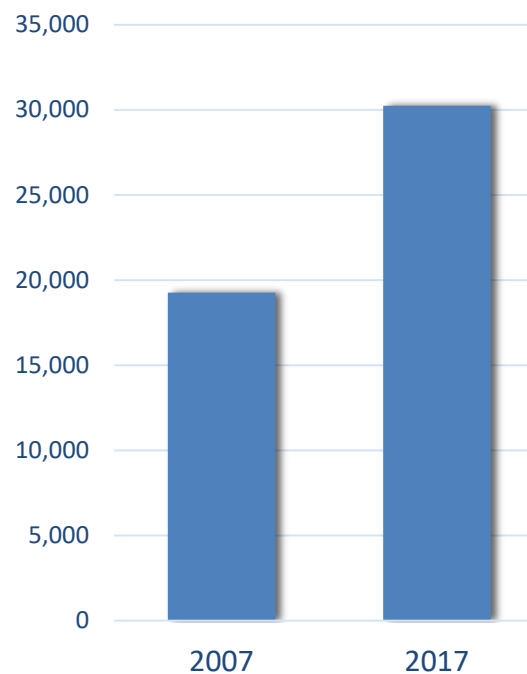
2017 Miles Flown: 88,846,150



## GHG MT emitted per year\*

2007 GHG emissions: 19,271 MT

2017 GHG emissions: 30,236 MT



\* Calculation via the Campus Carbon Calculator

# Setting Up the Program

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- Framework developed with assistance from Presidio Graduate School MBA team
- Peer Review Lessons Learned
  - Voluntary Programs garner few offsets
  - Federal contracts and grants cannot be charged for air travel offsets
  - To operationalize, keep it simple

# Process Considerations

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1. “Fee Type” options and selection
2. UCLA process for airline ticket purchases & reimbursement
  - How to capture trip information
3. Carbon offset information gathering
  - What kinds are there? What is the fee per metric ton?



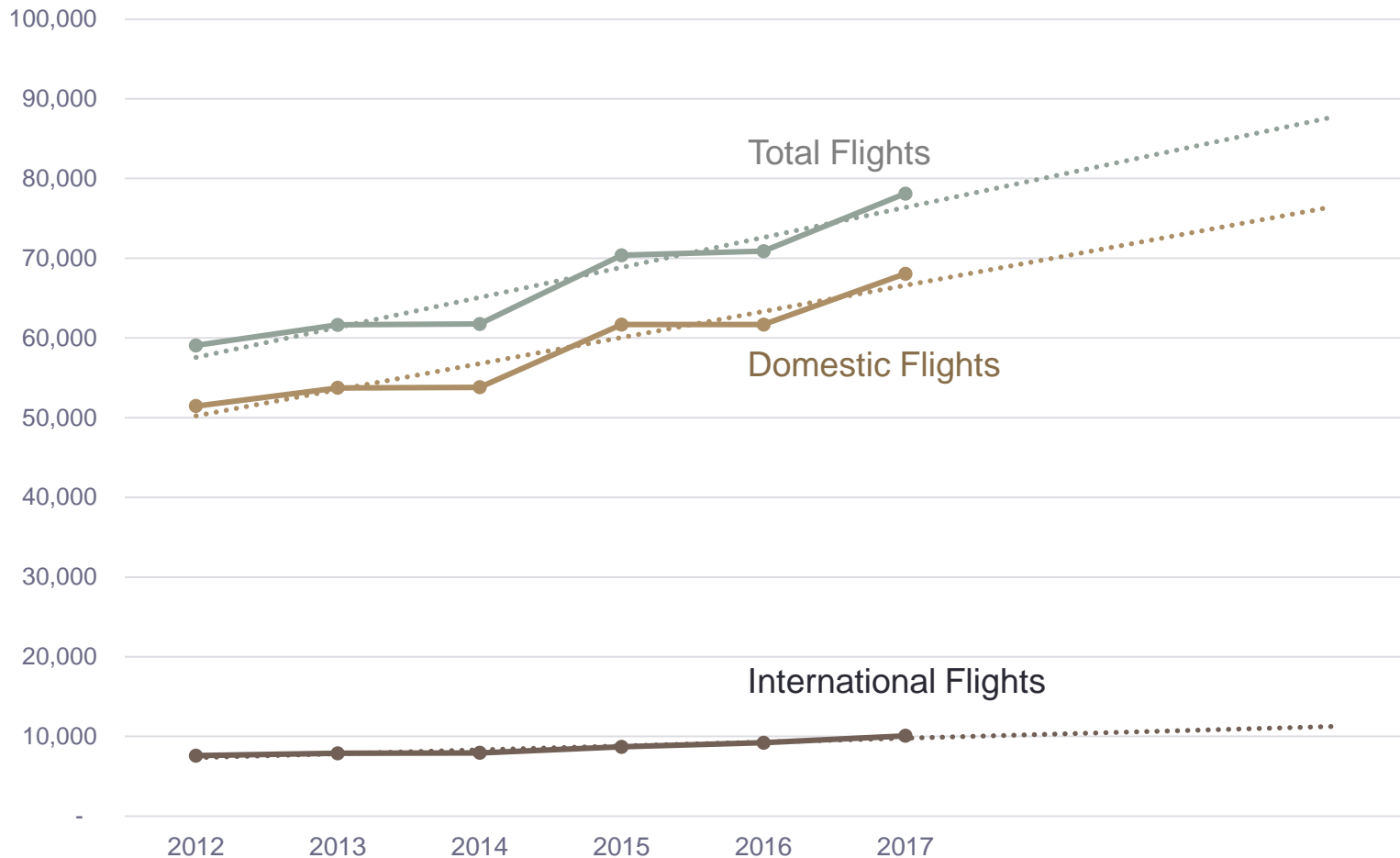


# Fee Options Considered

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| Fee Type                  | Pros and/or Cons   |
|---------------------------|--|
| Fee Based on Ticket Price | Little relationship to GHGs emitted                          |
| Fee Based on Miles Flown  | Difficult to implement and precision does not equal accuracy |
| Flat Fee per Trip         | Easy to implement; issues of equity                          |
| Tiered Flat Fee per Trip  | Easy to implement, addresses equity issues                   |

# How to Determine Fees Needed: Forecasting UCLA Flight Volume



# Forecasting UCLA Flight Emissions

|                              | 2015       | 2016       | 2017       | 2018       | 2019        | 2020        |
|------------------------------|------------|------------|------------|------------|-------------|-------------|
| <b>Emissions</b>             | 22,384     | 23,564     | 30,236     | 32,060     | 33,884      | 35,708      |
| <b>Miles</b>                 | 70,099,592 | 75,694,213 | 88,846,150 | 95,095,003 | 101,343,856 | 107,592,708 |
| <b>Total Flights*</b>        | 70,370     | 70,894     | 78,115     | 80,697     | 83,278      | 85,860      |
| <b>Domestic Flights</b>      | 61,678     | 61,678     | 68,043     | 70,165     | 72,286      | 74,408      |
| <b>International Flights</b> | 8,692      | 9,216      | 10,072     | 10,532     | 10,992      | 11,452      |

\* Not r/t and includes UCLA Athletics

# Carbon Pricing Demand Forecasting

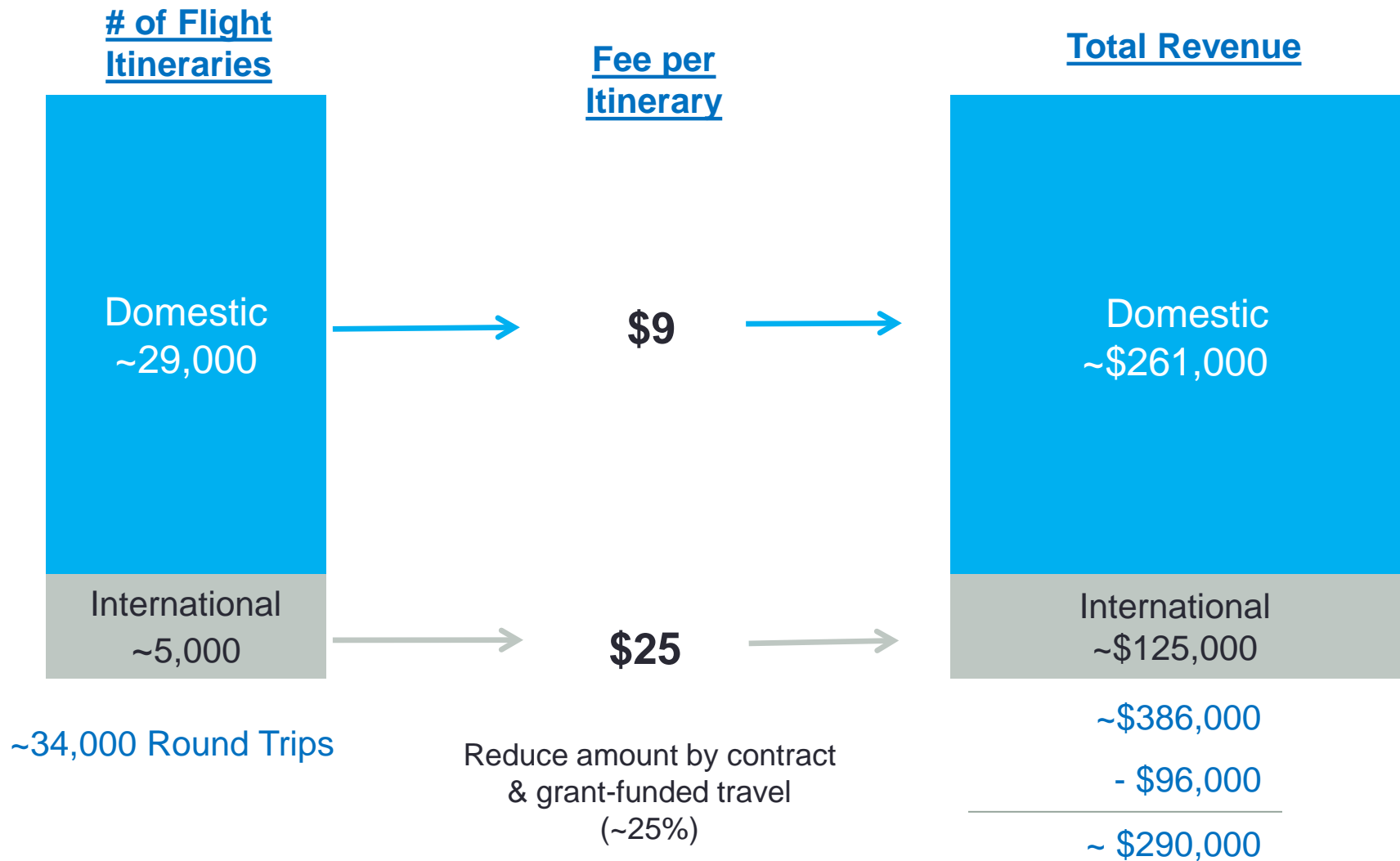
## California Energy Commission Projections:

| Preliminary 2017 IEPR Carbon Price Projections <sup>1</sup> |        |        |        |        |
|---|--------|--------|--------|--------|
|   | 2017   | 2018   | 2019   | 2020   |
| Carbon Price (Nominal\$/metric ton CO <sub>2</sub> E)       |        |        |        |        |
| Low Price (High Consumption Scenario) <sup>2</sup>          | 13.68  | 14.73  | 15.88  | 17.07  |
| Mid Price (Mid Consumption Scenario)                        | 13.44  | 15.27  | 17.35  | 19.71  |
| High Price (Low Consumption Scenario)                       | 13.66  | 16.00  | 18.76  | 21.98  |
| Tier 1 APCR / Proposed post-2020 APCR                       | 46.34  | 48.69  | 51.150 | 53.73  |
| CPI: Urban Consumer - All Items, (Index, 2015)              | 103.68 | 106.49 | 109.42 | 112.19 |
| CPI Annual Rate of Change                                   | 2.46%  | 2.71%  | 2.75%  | 2.53%  |

<sup>1</sup> Integrated Energy Policy Report, CA Energy Commission

<sup>2</sup> Price increases in calendar years subsequent to 2016 will be equal to the offer price for each tier from the previous calendar year increased by five percent plus the rate of inflation as measured by the Consumer Price Index for All Urban Consumers.

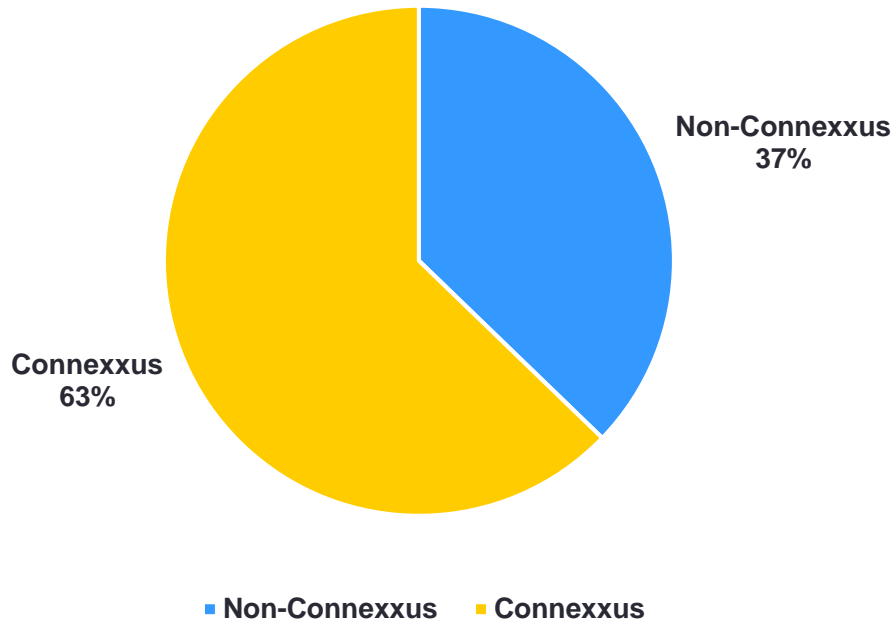
# Fee Adds Nominal Amount to Total Trip Cost



# UCLA Business Air Travel – How Are Flight Reservations Made?

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## Source of flights flown per year

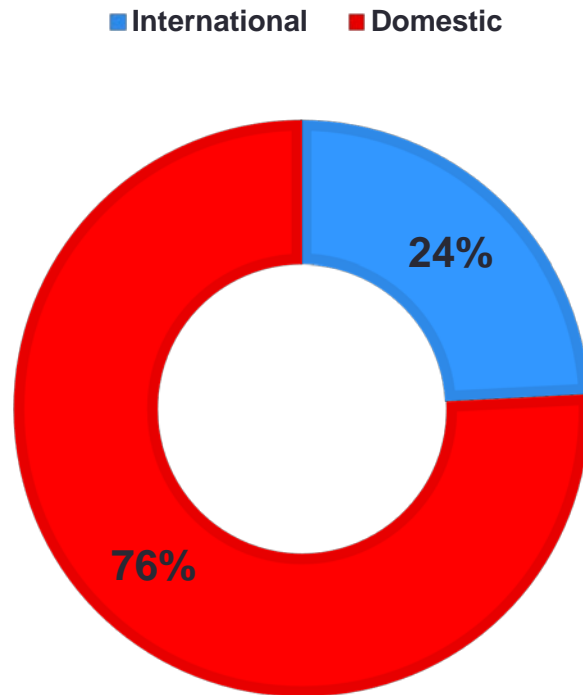


- **CONNEXXUS Travel System** –
  - No University-wide mandate to use system
  - Most faculty and some staff use other tools to book flights
- **Express** –
  - The electronic reimbursement system

# Business Air Travel by Destination

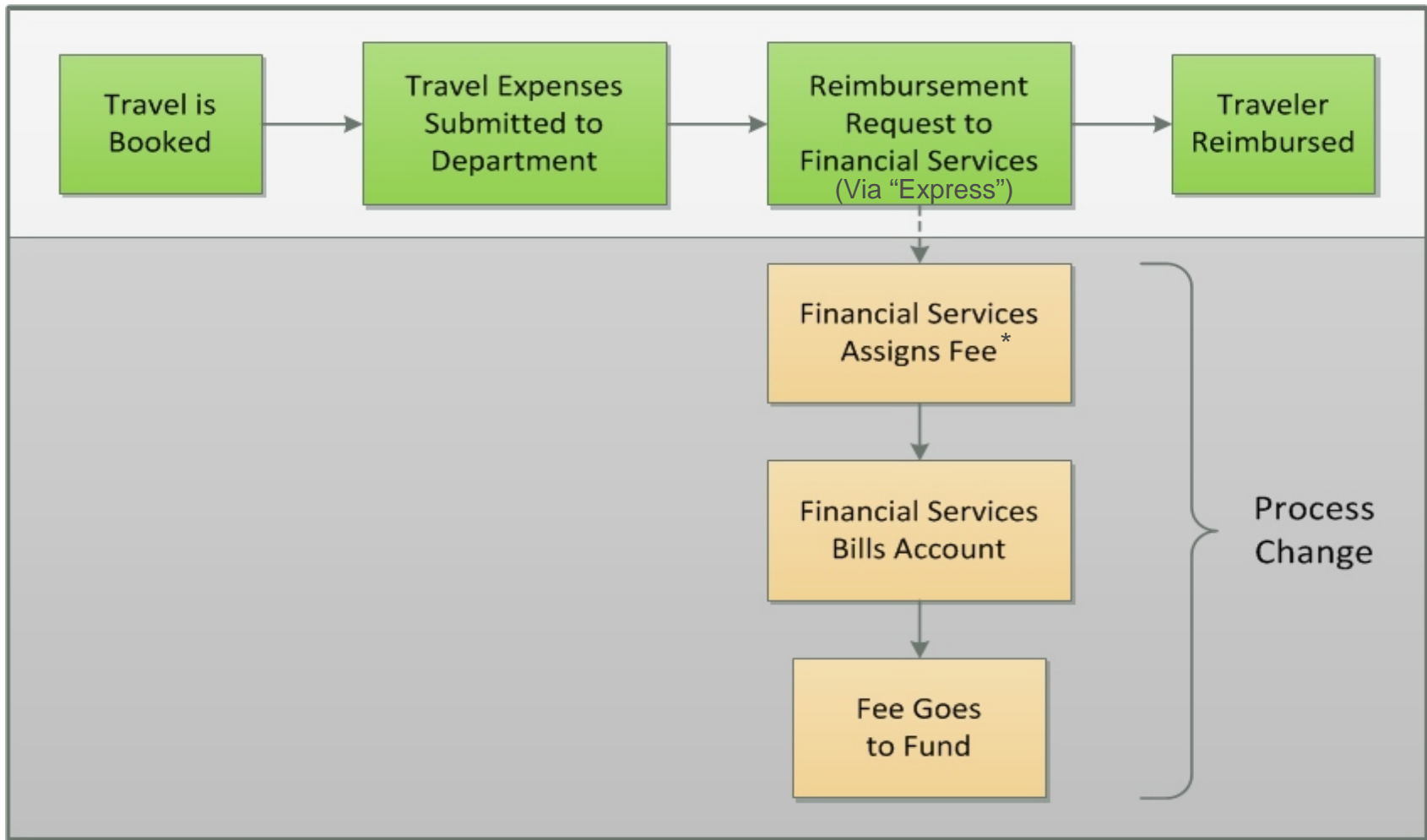
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## Percent by Trip Type



- Express reimbursement system already splits domestic and international flights

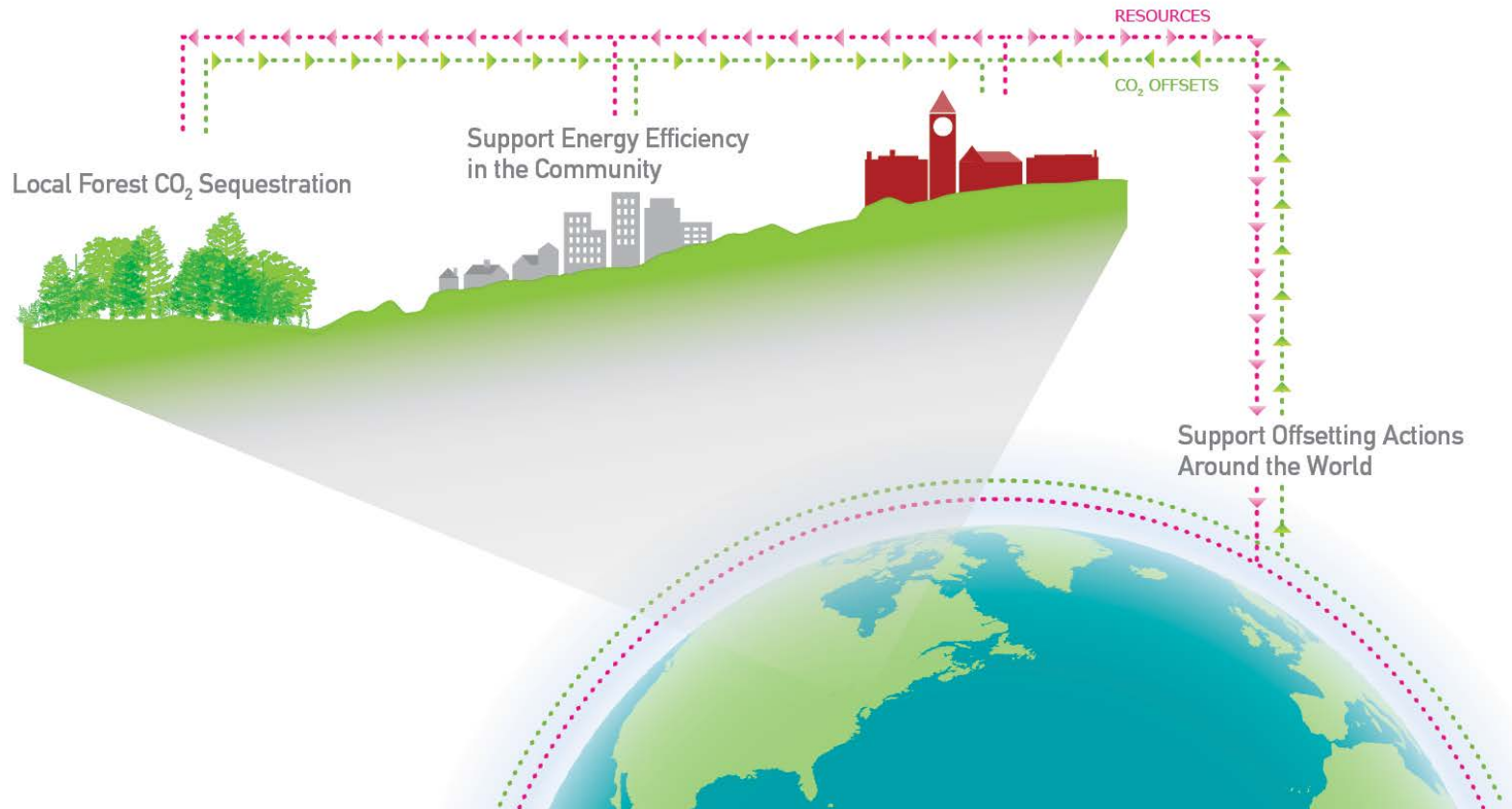
# How Are Fees Be Collected?



\*To non-contract/grant accounts



# Local Or Verified Offsets



From Cornell University

# How Will the Fund be Utilized and Managed?

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- **Local Projects**

-  Energy Efficiency

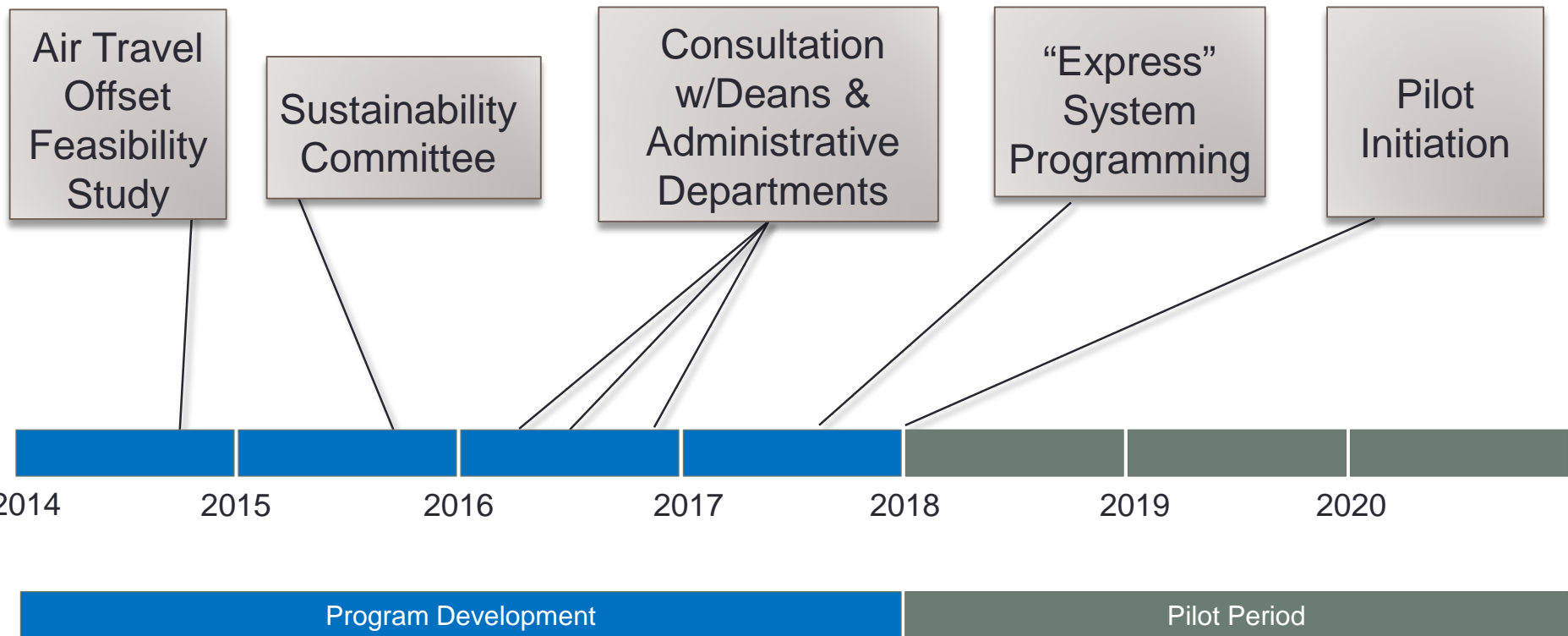
-  Greening

-  Renewable Energy

- **Oversight**

- Sustainability Office to oversee fund
  - Committee will recommend projects based on review of applications
  - Executive Sustainability Committee decides

# Timeline



# Q&A

