

**TRENDS IN REGIONAL JET DEPLOYMENT**  
**Panel Presentation at TRB Annual Meeting**  
**January 14, 2009**

*Presented by Paul McKnight*

# Agenda

- Trends in deployment of all aircraft types
  - Capacity (available seat miles) vs. flights
  
- Trends in deployment of regional jets (RJs)
  - Number of RJ flights?
  - Geographical patterns?
  - Size of RJs used?
  - Route distances?
  - Type of service?

## Timeframes Addressed

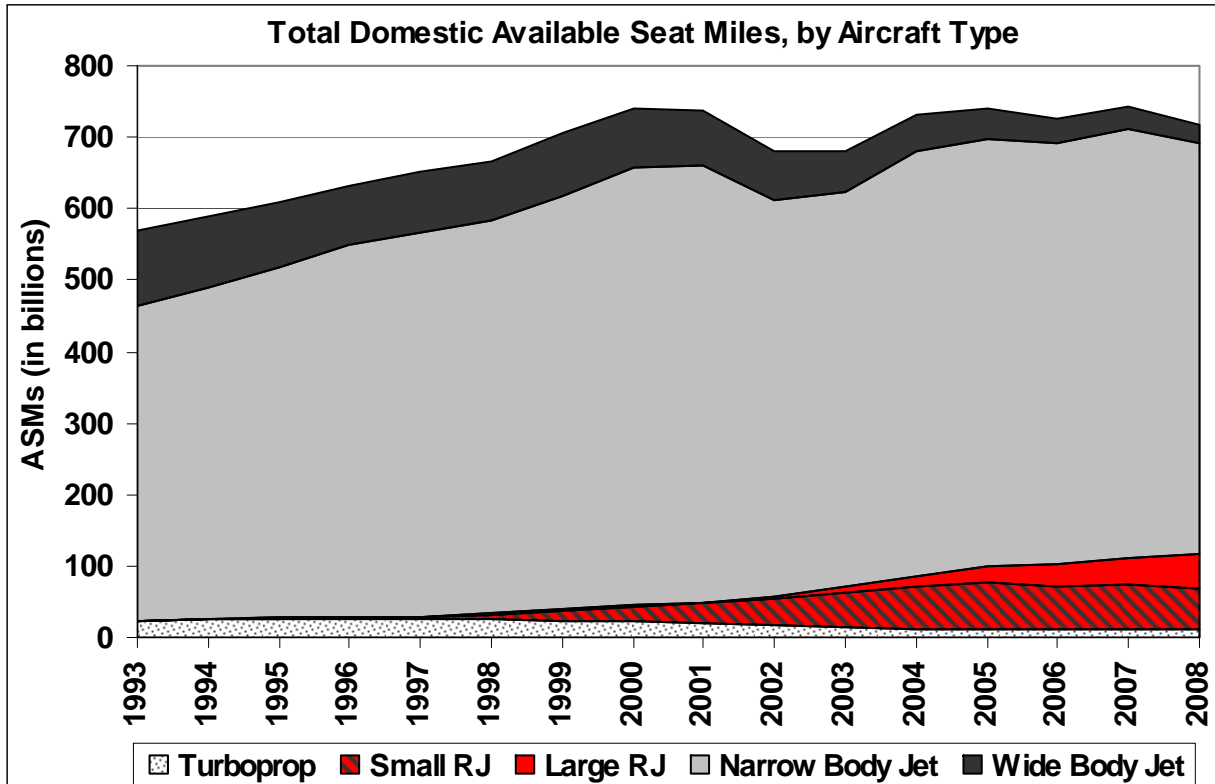
- **Aircraft deployment trends since 1993, when RJs were introduced**
  - Capacity (available seat miles) vs. flights
- **RJ deployment trends over past 10 years**
- **Change in RJ deployment from January 2001 to January 2009**
  - By geographic region
  - By stage length
  - By airport size (FAA hub categories)
  - By airline brand
- **Recent changes in RJ deployment (over past 12 months)**

## For the Purposes of This Presentation:

- **“Regional Jet (RJ)”**
  - Jet aircraft introduced since 1993, with <100 seats
  
- **“Small RJ” and “Large RJ”**
  - Small: Up to 50 seats
  - Large: More than 50 seats
  
- **“Domestic” study area**
  - Lower 48 states of the U.S., as well as Canada
  - Excludes Alaska, Hawaii, Puerto Rico, the U.S. Virgin Islands, and Islands of the U.S. Pacific Trust

# 15-year Trends in Overall Domestic Capacity (ASMs)

1993-2008

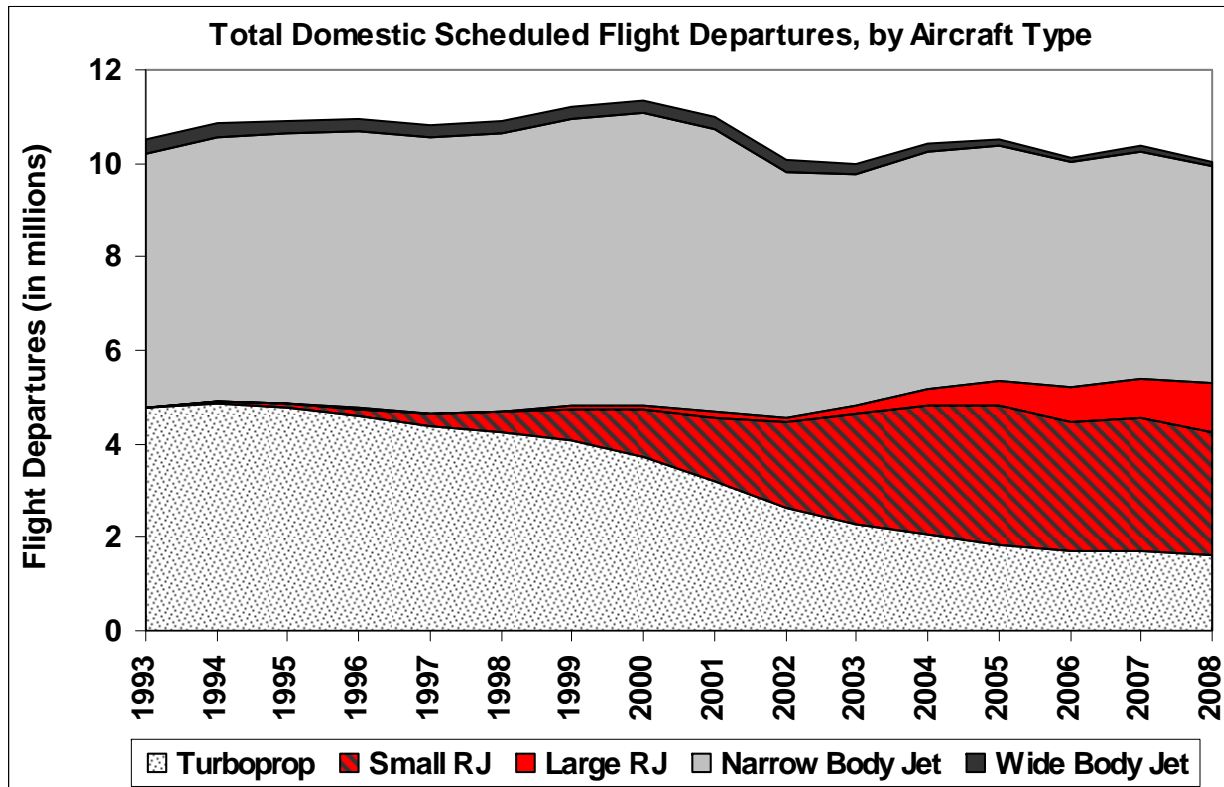


- Growth prior to 2001, flat since then
- Longer flights, on average
- Slightly larger aircraft
- RJs made up 15% of domestic capacity in 2008

Source: Official Airline Guide.

# 15-year Trends in Overall Domestic Flights

1993-2008



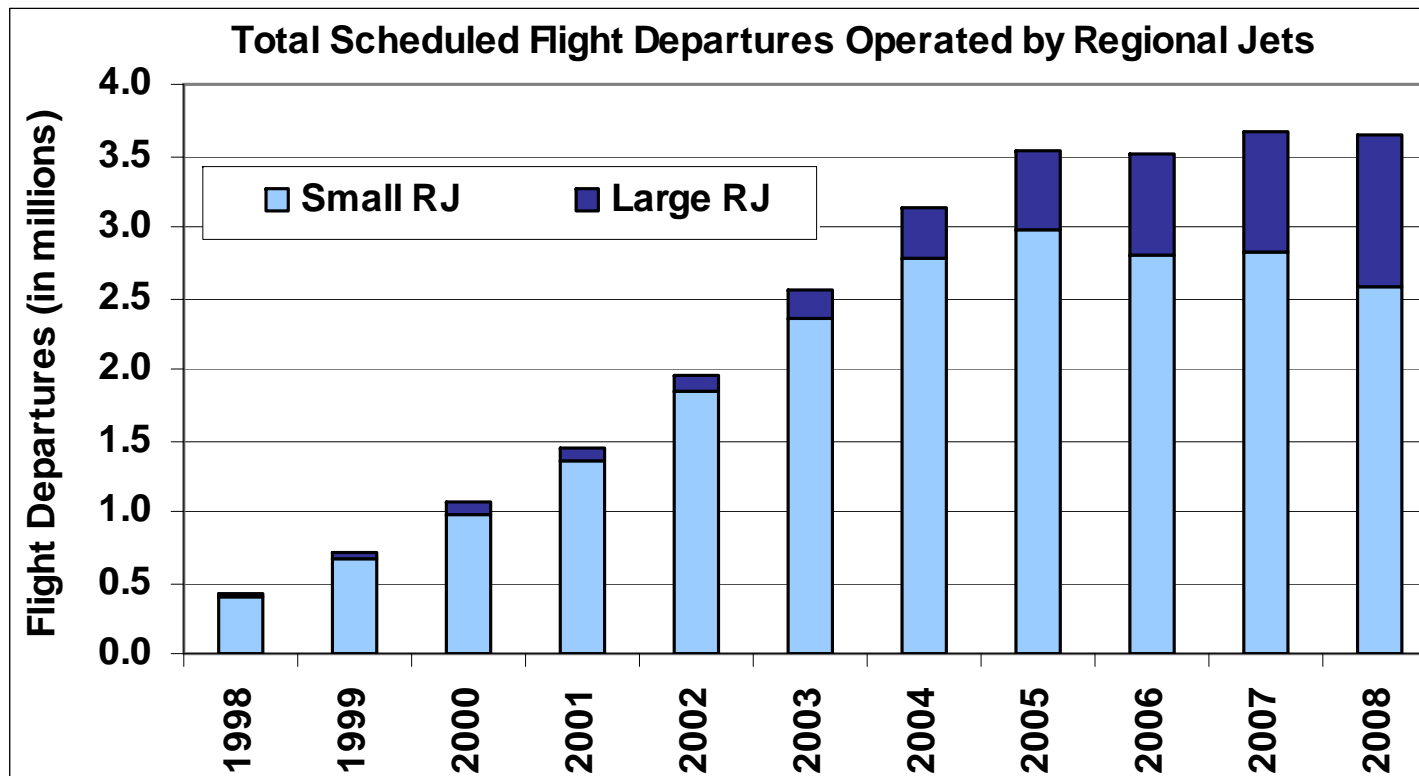
- No net growth in passenger flights
- RJs made up 36% of domestic flights in 2008

Source: Official Airline Guide.

# 10-year Trends in Domestic Regional Jet Flights

1998-2008

- In recent years, increases in flights by Large RJs roughly matched decreases in flights by Small RJs

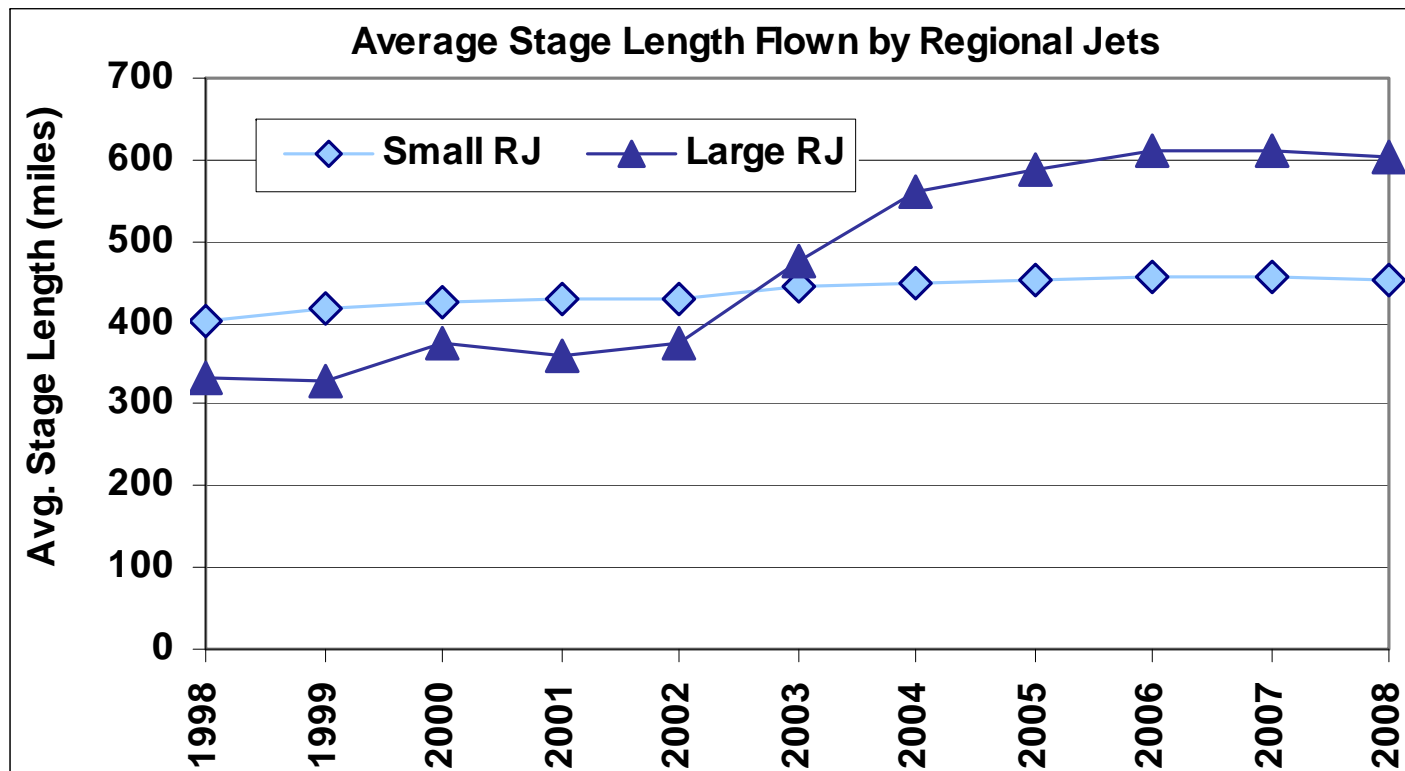


Source: *Official Airline Guide*.

# 10-year Trends in Domestic Regional Jet Flights (cont.)

1998-2008

- Large RJs being used for longer flights (due to greater range and comfort)

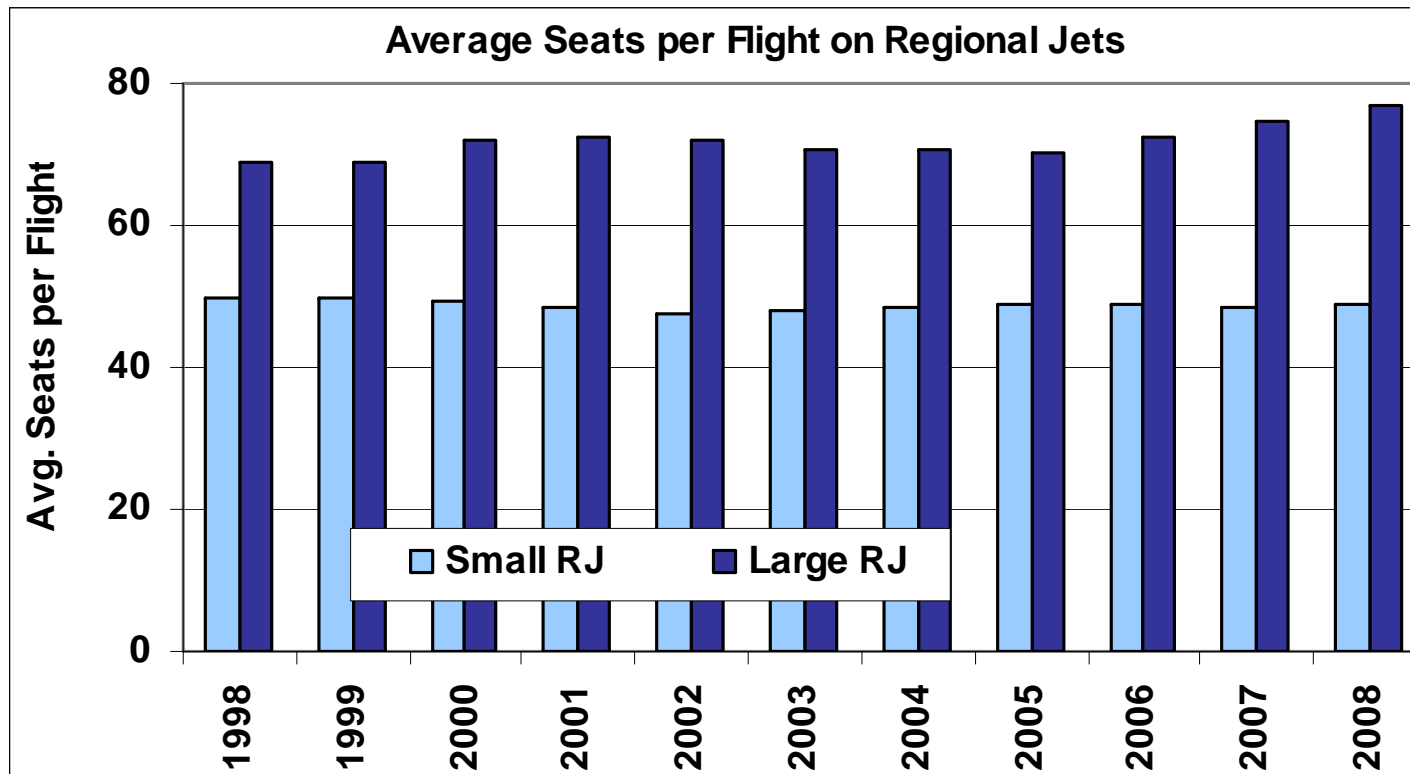


Source: Official Airline Guide.

# 10-year Trends in Domestic Regional Jet Flights (cont.)

1998-2008

- Size of Large RJs edging up, on average, while size of Small RJs is static

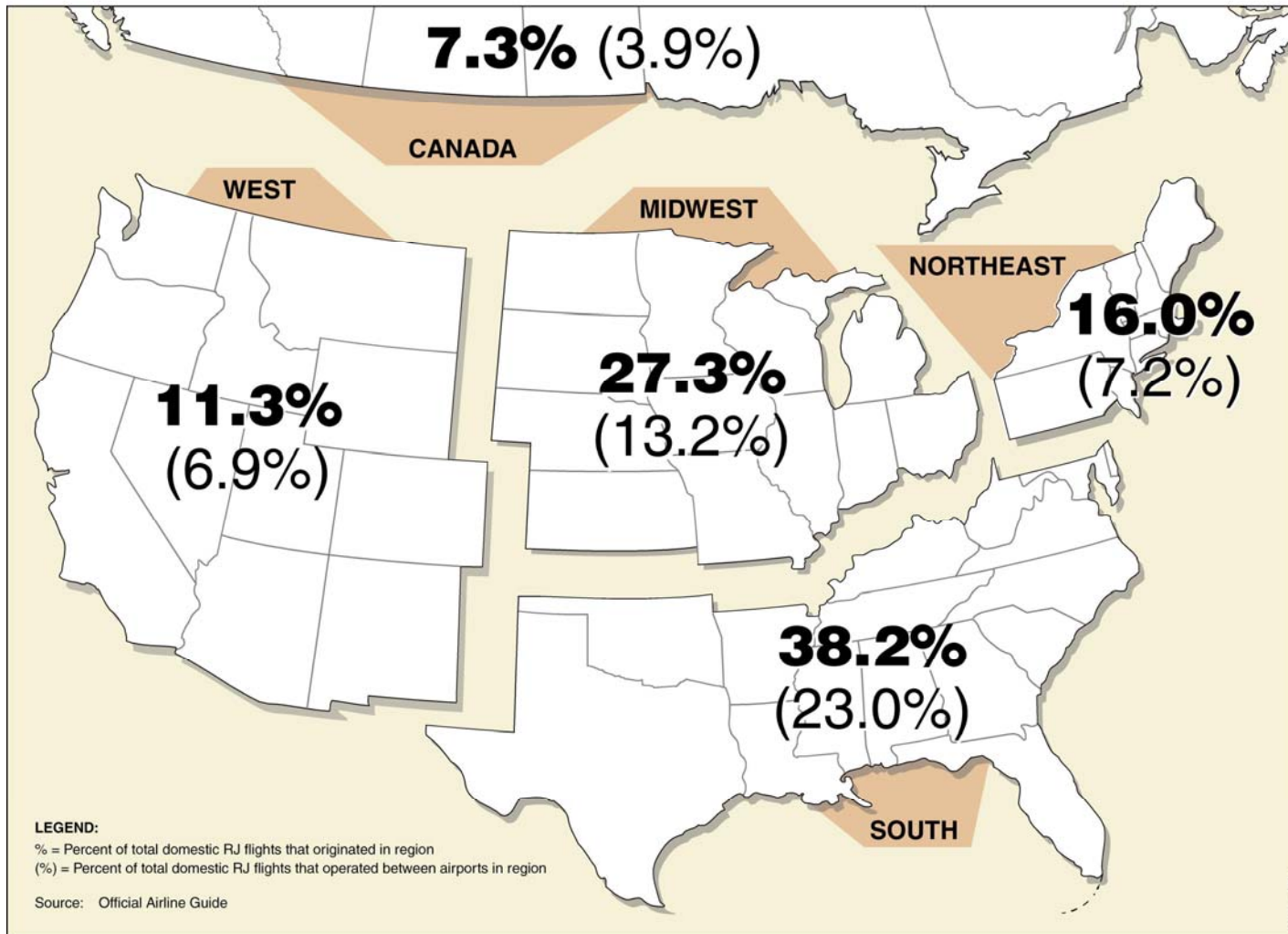


Source: Official Airline Guide.

# Domestic Regional Jet Flights, by Geographic Region

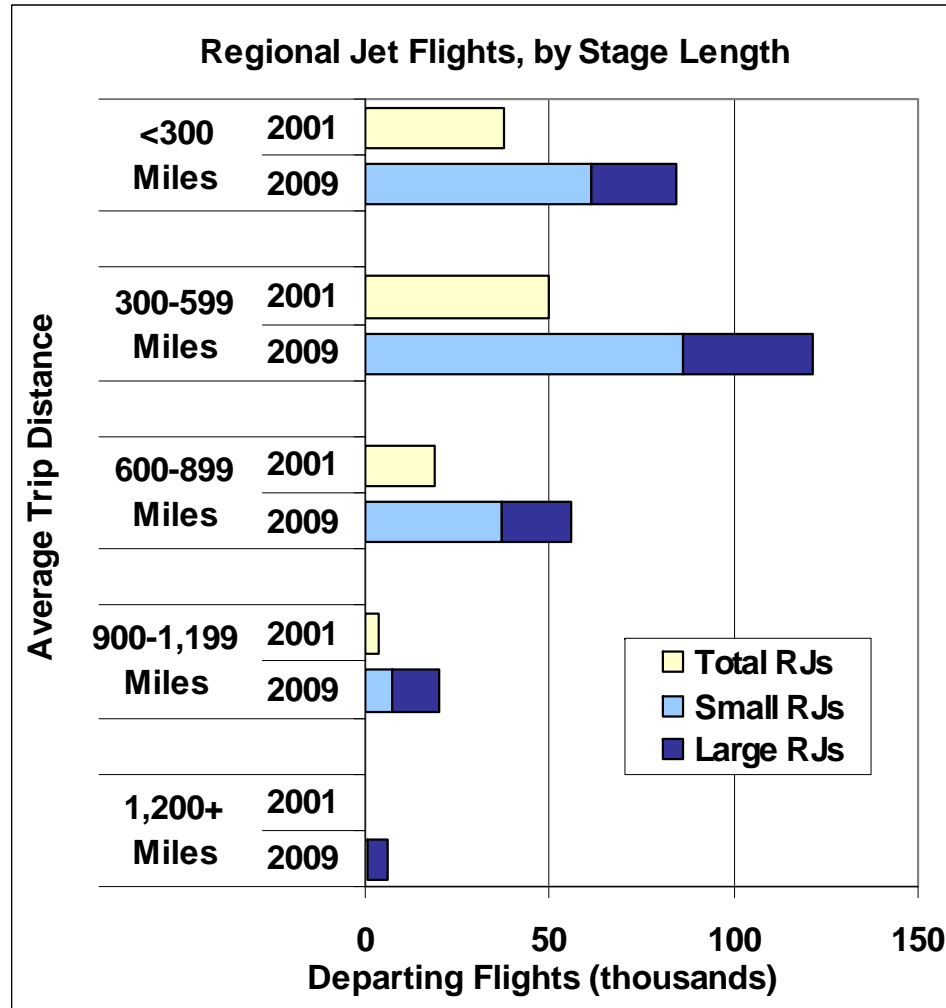
January 2009

Continental U.S. and Canada, by Geographic Region



# Changes in Domestic Regional Jet Flights, by Stage Length

January 2001 vs. January 2009

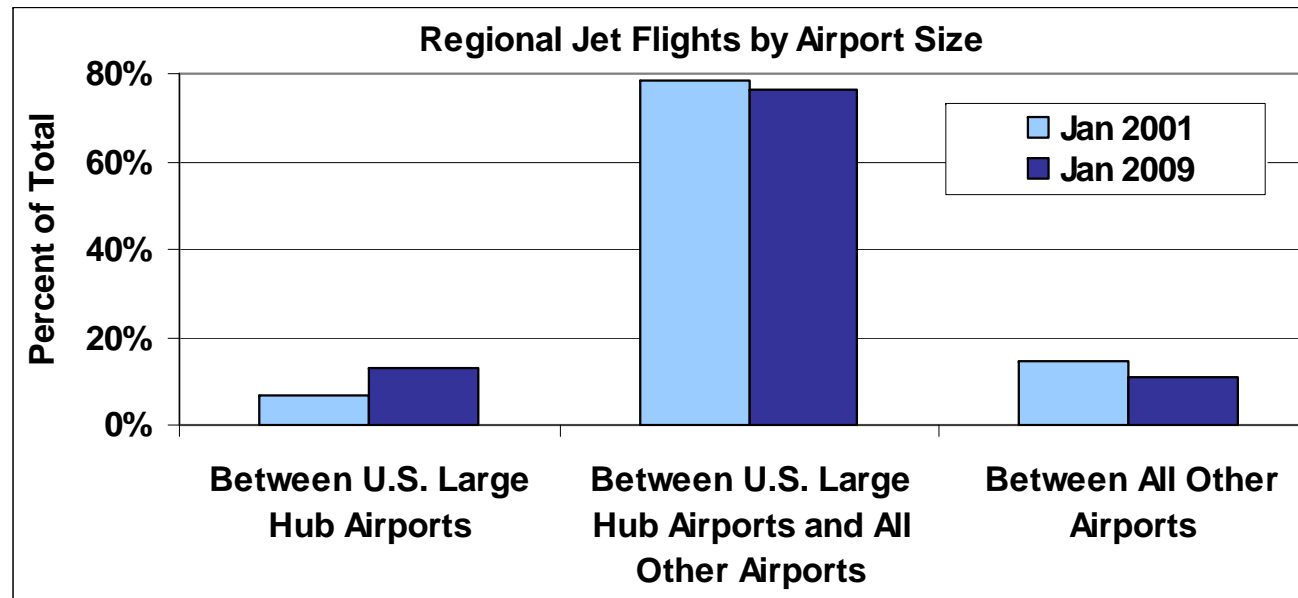


Source: *Official Airline Guide*.

# Changes in Domestic Regional Jet Flights, by Airport (Hub) Size

January 2001 vs. January 2009

- Nearly 90% of RJ activity tied to U.S. Large Hub airports (vs. 85% in 2001)
- Increase in proportion of flights linking U.S. Large Hub airports
- Reduction in proportion of flights linking all other airports



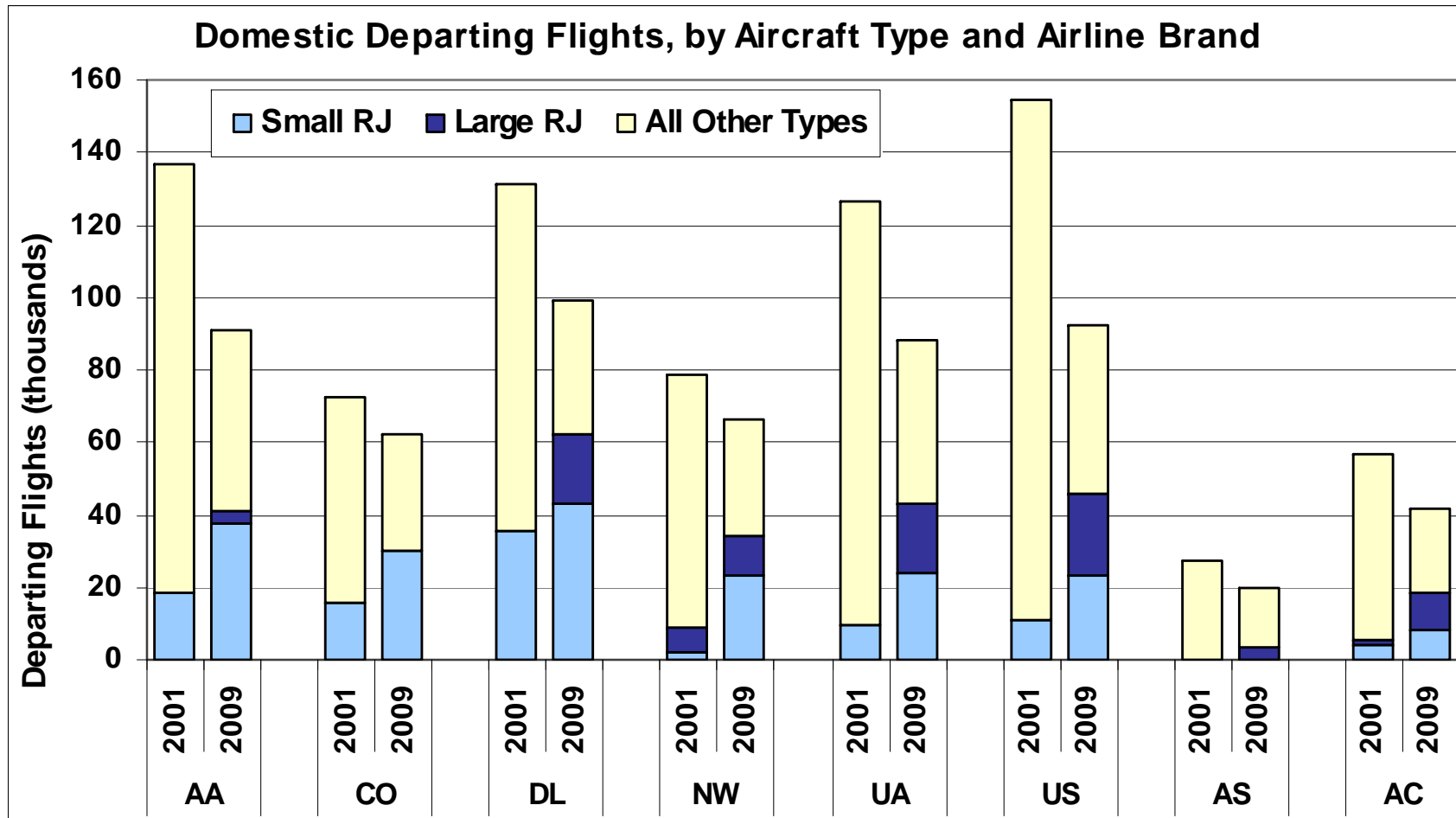
Source: *Official Airline Guide*.

Notes: U.S. airports are classified per the FAA's 2007 airport hub size categorization.

"All other airports" includes U.S. Medium, Small, and Non Hub airports, as well as all Canadian airports.

# Changes in Domestic Flights Including RJs, by Selected Airline Brand

January 2001 vs. January 2009



Source: Official Airline Guide.

# Changes in Domestic Regional Jet Deployment over Past 12 Months

*January 2008 vs. January 2009*

- **By geographic region—3 notable shifts:**
  - 31.1% drop in flights between Northeast and South airports
  - 41.9% drop in flights between Western airports
  - 42.2% increase in flights between Northeast airports
- **By stage length:**
  - Reduction of Small RJ flights in all stage length categories
  - Increase of Large RJ flights in all stage length categories
- **By airport (Hub) size:**
  - A shift of RJ deployment to increased focus on Large Hub airports (86.6% to 89.1%)
  - Fewer Medium-to-Medium hub (-41.4%) and Medium-to-Small hub (-25.0%) flights
- **By role in code-share service:**
  - Reduction of Small RJ flights by all airlines (AS has none)
  - Increase of Large RJ flights by most airlines (CO has none)
  - Drop of one-third of spoke-to-spoke RJ flights

# Current Composition of Domestic Flights, by Aircraft Type

January 2009

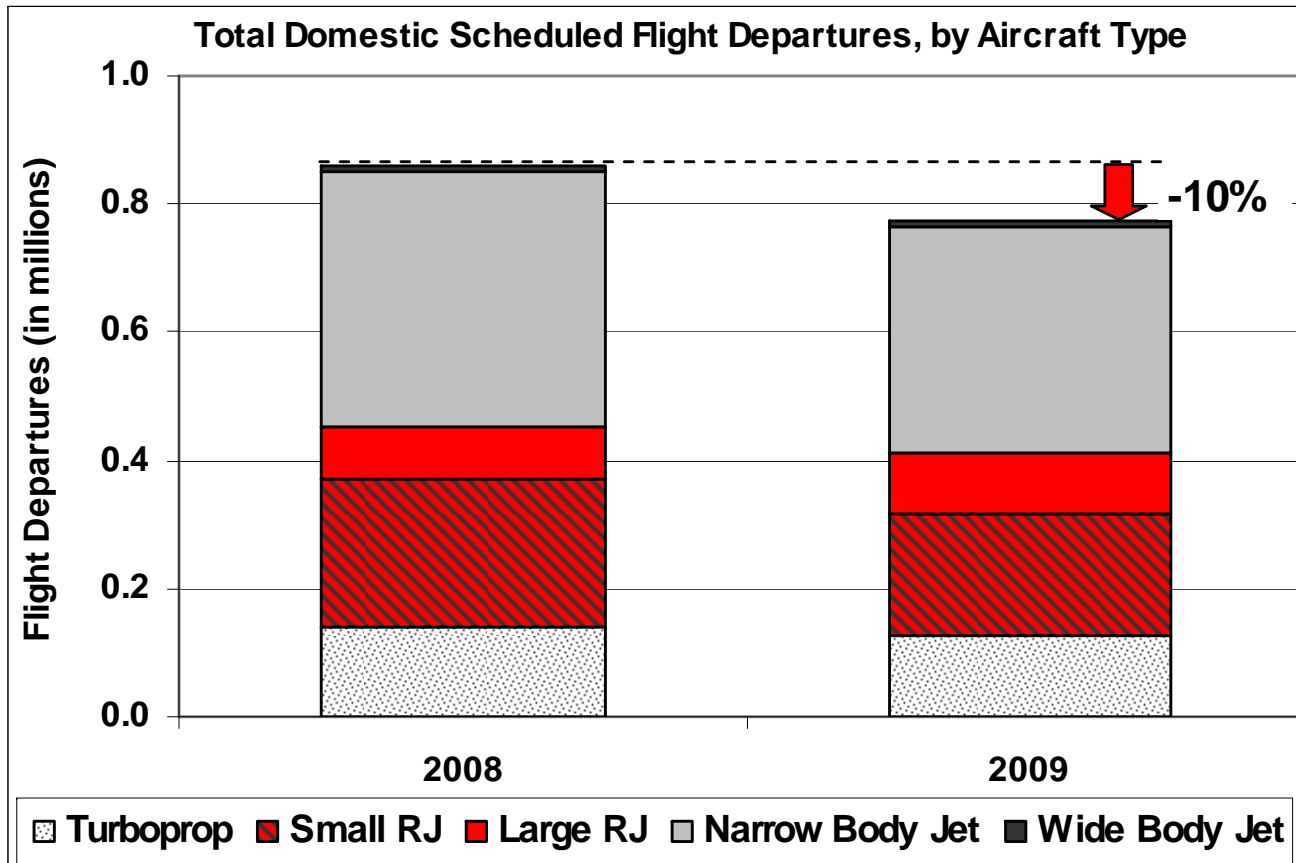
## Domestic Scheduled Flights by Aircraft Type and Stage Length

| Stage Length:   | Regional Jets |              |              | All Other Types |               | Total         |
|-----------------|---------------|--------------|--------------|-----------------|---------------|---------------|
|                 | Small         | Large        | Total        | Turbo-prop      | Mainline Jets |               |
|                 |               |              |              |                 |               |               |
| 300-599 Miles   | 11.2          | 4.5          | 15.7         | 2.6             | 13.0          | 31.3          |
| 600-899 Miles   | 4.8           | 2.4          | 7.2          | 0.1             | 9.2           | 16.5          |
| 900-1,199 Miles | 0.9           | 1.7          | 2.6          | 0.0             | 8.3           | 10.9          |
| 1,200+ Miles    | -             | 0.8          | 0.8          | -               | 9.9           | 10.7          |
| <b>Total</b>    | <b>24.9%</b>  | <b>12.4%</b> | <b>37.3%</b> | <b>16.3%</b>    | <b>46.4%</b>  | <b>100.0%</b> |

Source: *Official Airline Guide*.

# Changes in Overall Aircraft Deployment over Past 12 Months

January 2008 vs. January 2009



Source: *Official Airline Guide*.

# Summary

- **No net growth in total domestic flights (all aircraft types) since 1993**
- **No net growth in RJ flights since 2005**
  - RJ flights are down in January 2009, about -8% from January 2008
- **Significant RJ presence in domestic market (2008):**
  - RJs provide 15% of total capacity (ASMs), and 36% of all flights
  - 90% of RJ flights link Large Hubs with smaller airports
- **Flights by Large RJs increasing, flights by Small RJs declining**
  - Large RJs now represent about 1/3 of total RJ flights
  - Large RJs tend to be used on longer-haul flights
  - Large RJs (avg. 77 seats) fill gap between Narrowbody Jets (avg. 141 seats) and Small RJs (avg. 49 seats)
- **Virtually all (97%) RJ flights operated in code-share service**
  - Of those, 91% operate to and from the hub airports of 8 airlines
  - RJs have not generally been used successfully to link smaller communities