Chapman University

FY18 Sustainability Solutions Presentation

March 2020
Comprehensive Facilities Intelligence Solutions

- **FACILITIES BENCHMARKING & ANALYSIS**: Take control of your facilities and make the case for change without the guesswork.
- **FACILITIES ASSESSMENT & PLANNING**: Plan and execute capital investment plans that are inclusive, credible, flexible, affordable and sustainable.
- **SPACE UTILIZATION**: Ensure your space is working up to its full potential.
- **SUSTAINABILITY SOLUTIONS**: Measure and improve environmental stewardship.

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Campus Demographics

Institutional Data

• **Total campus GSF** – *3.4 Million*
  
  • **Buildings awaiting GSF validation:**
    

• Campus acreage – 76 acres

• FTE’s of students, faculty, and staff – 10,442

*Need to verify GSF of additional real estate properties*
Components of Chapman’s Emissions Profile

**Scope 1 — Direct GHGs**
- On-Campus Stationary (Natural Gas; Oil)
- *Vehicle Fleet*
- *Refrigerants*
- Agriculture

**Scope 2 — Upstream GHGs**
- Purchased Electricity

**Scope 3 — Indirect GHGs**
- Faculty/Staff/Student Commuting
- Directly Financed Air & Ground Travel
- Study Abroad Travel
- *Solid Waste*
- Wastewater
- *Paper Purchasing*
- Transmission & Distribution Losses

*Missing data
Emissions Summary
FY18 Gross Emissions: 22,311 MTCDE

Chapman’s Emissions have stayed consistent over duration of analysis

Total Gross Emissions Over Time

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Scope 1</th>
<th>Scope 2</th>
<th>Scope 3</th>
<th>Total MTCDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2014</td>
<td></td>
<td></td>
<td></td>
<td>22,929.78</td>
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<tr>
<td>FY2015</td>
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<td>FY2018</td>
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<td>22,311.21</td>
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</table>
Distribution of Gross Emissions by Level of Control

FY2018 emissions by source and scope

Emissions by Scope

- **Scope 1**: 8%
- **Scope 2**: 45%
- **Scope 3**: 47%

**Scope 1 Sources**
- Other On-Campus Stationary: 1,841 MTCDE
- Direct Transportation: 629 MTCDE
- Refrigerants & Chemicals
- Agriculture

**Scope 2 Sources**
- Purchased Electricity: 10,416 MTCDE
- Commuting
- Travel
- Waste/Wastewater
- Paper Purchases
- T&D Losses

**Scope 3 Sources**
- Commuting: 5,852 MTCDE
- Travel: 3,630 MTCDE
- Waste/Wastewater: 526 MTCDE

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Emission Breakout
Total Utility Emissions

Scope 1 emissions have decreased by 43%, Scope 2 emissions have increased by 14%
Other Scope 1 Emissions

Only fertilizer emissions are shown, FY18 data used for all years

Other Scope 1 Emissions Over Time

MTCDE

FY2014 | FY2015 | FY2016 | FY2017 | FY2018

Direct Transportation | Refrigerants | Fertilizer
Scope 3 Emissions

Commuting and travel make up 88% of Scope 3 emissions

Scope 3 Emissions Over Time

Waste and paper emission data unavailable
Updated Commuting Data

Commuting emissions have increased by 17% since baseline year.

Commuting Emissions

FY2014 | FY2015 | FY2016 | FY2017 | FY2018
---|---|---|---|---
MTCDE | MTCDE | MTCDE | MTCDE | MTCDE

- **Student Commuting**
- **Employee Commuting**
Directly Financed Travel Profile

Directly Financed Travel emissions have decreased 3% since baseline year

Chapman’s Travel Emissions

- FY2014
- FY2015
- FY2016
- FY2017
- FY2018

Directly Financed Travel
Study Abroad Travel Profile

Study Abroad emissions have decreased 38% since baseline year

Chapman’s Study Abroad Emissions

<table>
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<td>FY2017</td>
<td>3,000</td>
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<tr>
<td>FY2018</td>
<td>2,000</td>
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Water Profile

Wastewater production and emissions has increased from FY17 similar to FY14 levels.