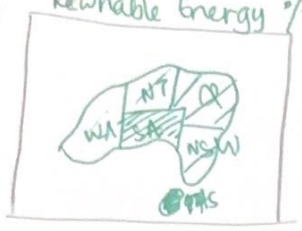
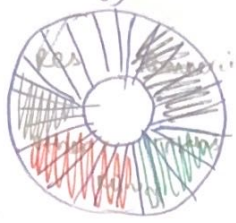
IDEAS

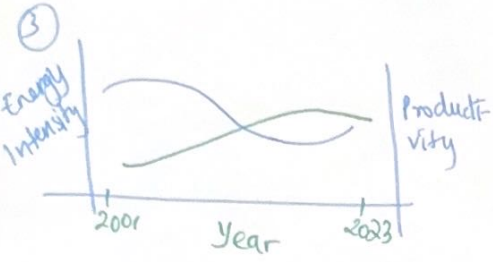
① Renwable Energy %



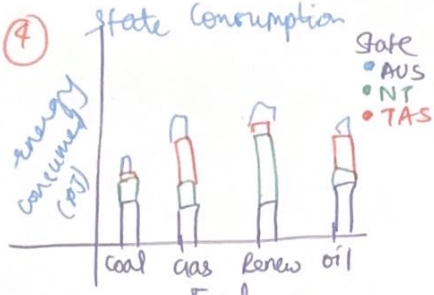
② Sector Energy Consumption (2001-2023)



③

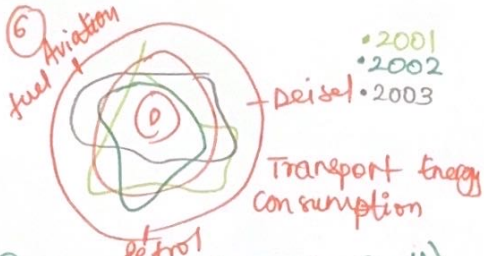


④ State Consumption

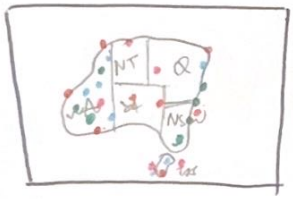


⑤ Sector Energy Consumption (%) tree Map

⑥



⑦ Renewable Plant Locations



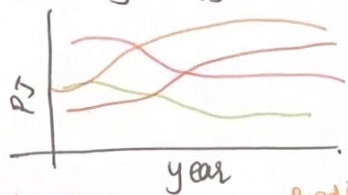
- Coal
- Wind
- hydro
- oil

⑧

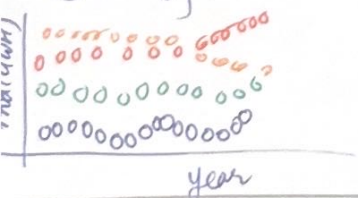
⑨ Import / Export

⑩ Mining Energy consumption

- coal
- Gas
- oil

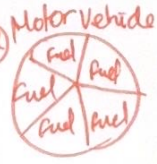


⑪ Energy production

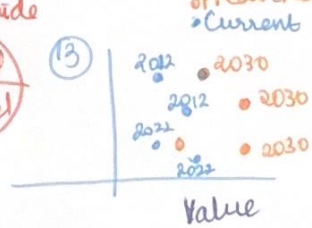


- oil
- Black coal
- Brown coal
- wind

⑫ Motor Vehicle

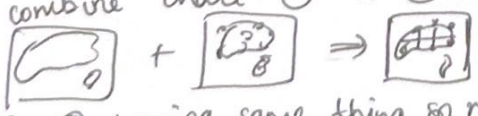


⑬



COMBINE & REFINE:

- combine chart ① & ⑦ on same map with ① in log.



- ②&⑤ showing same thing so remove ⑤ & add slider for years in ②
- Change ④ into bubble plot & colour for each state
- change ⑨ into stacked area so no -ve values (with opacity)

FILTER:

- Remove ③ as doesn't show information on renewable energy.
- Remove ⑥ as confusing with different years for transportation
- Remove ⑩ line chart as too specific for sector
- Remove individual maps ① & ⑦ as easier to see all info in one map with zoom functionalities.

CATEGORISE:

About Renewable Energy & how to interact

↓

State-wise charts ④ & ① to give info on state consumption & production of renewable & non-renewable

↓

Fuel specific charts ⑧ & ⑪ & ⑨ for fuel comparison

↓

End with info on sectors

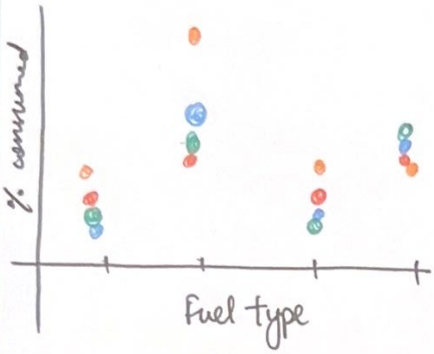
QUESTIONS:

- Is there too much specific information taking away from renewable energy?
  - Perhaps, eliminating some charts might help with smoother storyline
- Is there enough interactivity to understand data trends?
  - Adding filters, sliders & dropdown with user documentation should help.

LAYOUT:

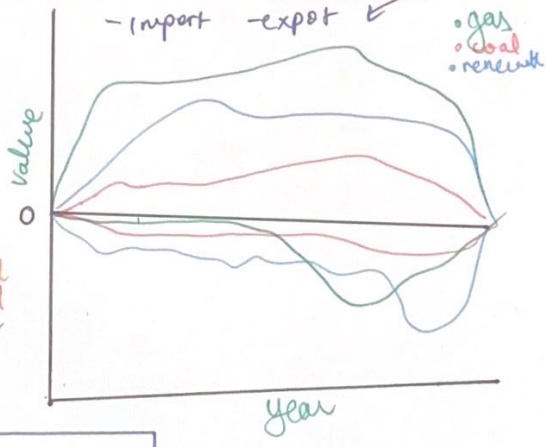
Renewable Energy Australia

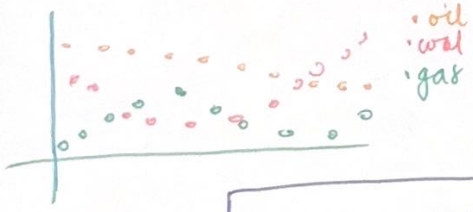
Start by talking about how green Australia is per state



State renewable consumption above transitions to all types of energy consumed by state

Break down of ~~flow~~ each fuel type over the years 2001 - 2023





Sectors Using Energy

FOCUS:

→ 3 important sections about states, fuel types, sector types to show flow of story on how consumed & produced

→ Different colour for each section background to help focus

Title: Renewable Energy Stats

Author: Akshita Medisetta

Date: 12/10/2024

Sheet: 2

Task: Layout design

COMPONENTS:

- Click on each state to see consumption of energy
- Choose year in radar chart in sector to see for specific year info.
- Hover on heat map or stream graph for detailed info.
- filter to see just import or just export

TOOLTIPS:

- Hover over each heat map square for detailed fuel type energy info per year
- Click on bubbles in scatter plot in section 2 to see particular fuel

PROS:

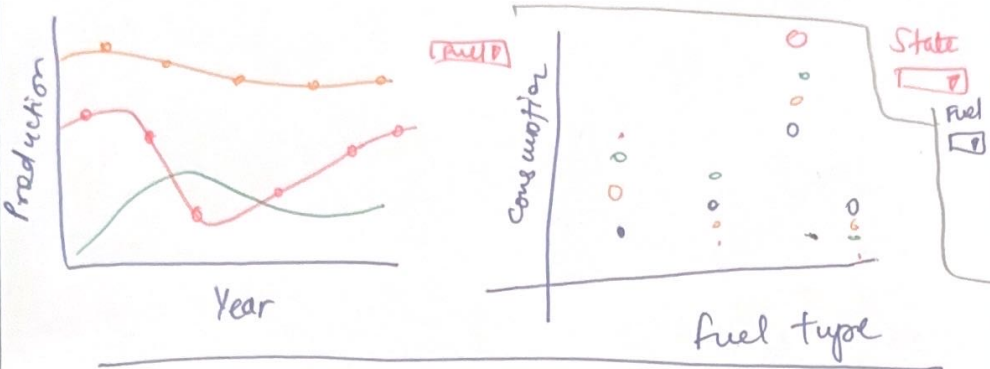
- Breaks down all information into easy to read sections
- Headings & text per section
- Not too much white space

CONS:

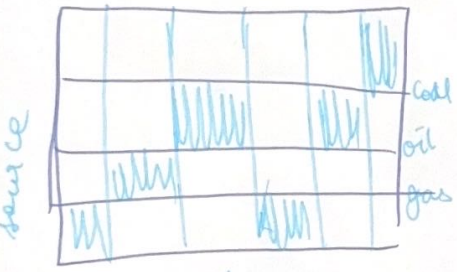
- Not very interactive
- Can look disjointed
- Very long

LAYOUT:

text

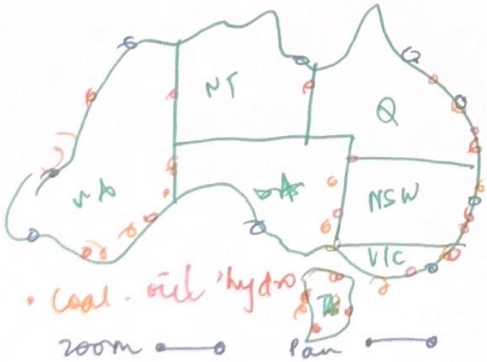


Each different fuel type is either generated or consumed by different states.



this is how much are used to generate electricity for states

how much renewable energy does each state produce & use?



Tasmania uses 44.1% renewable energy & has over 10 plants producing hydro-energy

FOCUS:

→ The focus is on the types of fuels (non-renewable) that are produced & used by each state.

- so bubble plot helps show consumption
- line chart with dots shows production
- heat map shows generation of electricity

Title: Fuel usage Australia

Author: Akshita Nediyatta

Date: 13/10/2024

Sheet: 3

task: Layout page

COMPONENTS:

→ drop-down per chart in focus to help see specific State & fuel information to compare production & consumption

- Filter & zoom, pan left/right, up/down for each state & specific region as desired

TOOLTIPS:

- Hover on points in bubble plot & line graph to see value in peta joules per year
- Hover on heat map rectangles to see which fuel was used to generate electricity from 2001-2003

PROS:

- Not too much info. so won't lead to sensory overload, not cluttered
- Easy to filter & get info

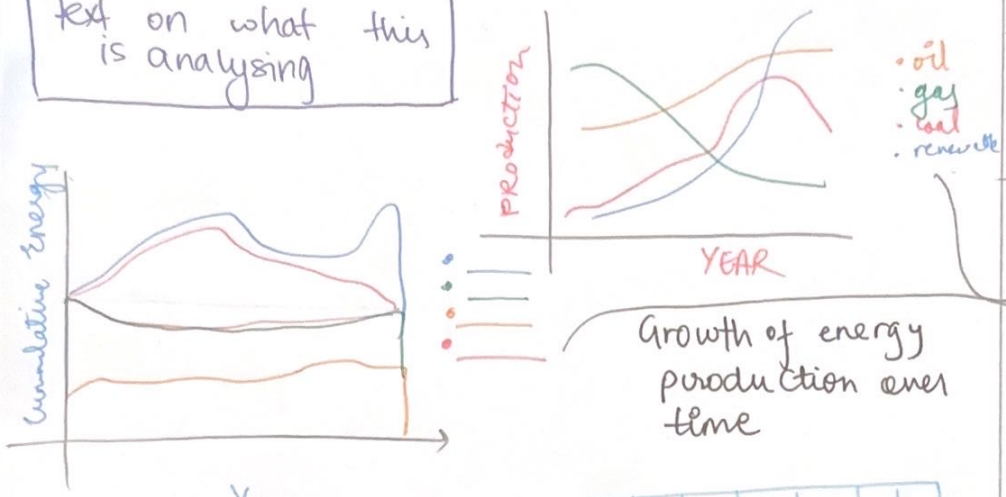
CONS:

- Can seem too empty or bare with not enough charts to get info & understanding
- sections seem disconnected

LAYOUT:

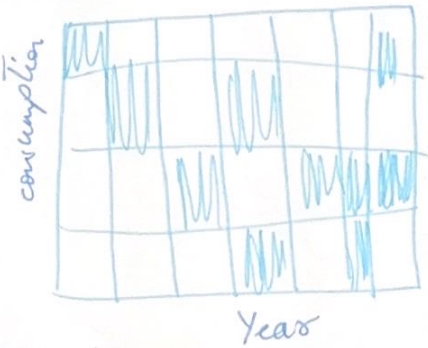
Renewable Energy trends

text on what this is analysing

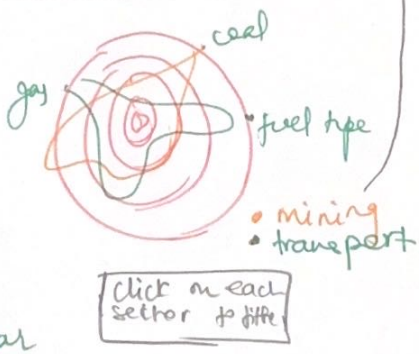


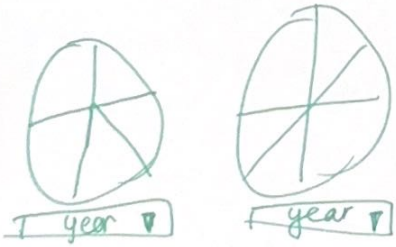
Growth of energy production over time

Fine-grained analysis of consumption at granular level



Tracks step changes in energy consumption per sector





Compare Energy mix by year

FOCUS:

→ There's no one focus on this because its analysing trends in energy consumption & production (both renewable & non-renewable) so each chart is important to find trend

→ Text next to each chart helps understand better & shows how to interact

Title: Renewable Energy Trends

Author: Akshita Meduatta

Date: 14/10/2024

Sheet: 4

Task: layout design

COMPONENTS:

→ Click on each fuel type to filter (same colour on both chart to get detailed comparison)

→ Filter by sector & year to see each sector consumption & production

→ Double pie chart to pick 2 years to compare energy mix

TOOLTIP:

→ Hover on heat map to get detailed info on CONSUMPTION by year

→ Hover on area in stacked area graph for cumulative & scaled values

PROS:

→ Easy to track trends over time

→ useful for detecting shift in production & consumption

CONS:

→ Too many lines & line chart can be confusing

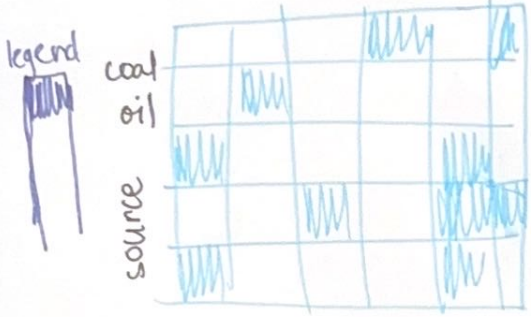
→ Heatmap can be hard to read with large data variation

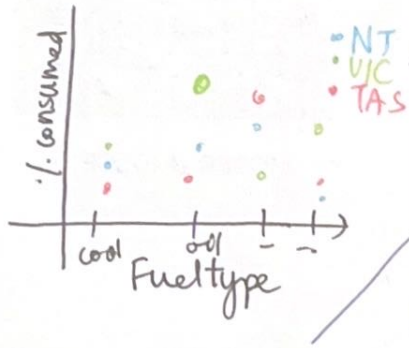
LAYOUT:

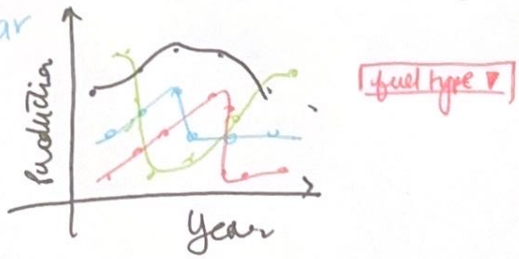
Renewable Energy Australia Statistics

text about renewable energy consumption & plant locations

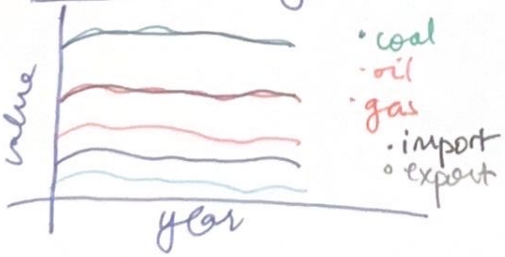
Break down of each fuel type over the years 2001-2023

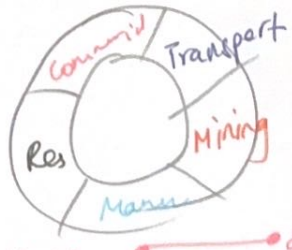






Sectors using fuel & its import / export





Fuel

Year 2001 2023

FOCUS:

→ Focus is on renewable energy & thats why starts with map with plant locations
→ Then breaks down into fuel type & its production & consumption

Title: Final Renewable stats
Author: Akshita Medivatha
Date: 15/10/2024
Sheet: 5
Task: Final 3/79 Assignment 2

OPERATIONS:

→ zoom & panning left/right & up/down capabilities to see map in detail
→ filter by state to reinforce info from map on whos doing best in renewable & using most non-renewable
→ filters for fuel type to see easy breakdow
→ year slider for donut

TOOLTIPS:

→ Hover on all points & rectangle to see detailed information of year, value & scaled value

DETAIL:

- I'll use Github to host website
- HTML/CSS for styling & formatting
- Excel & R for cleaning
- Json files for developing

Timeline
- Around 7 days to complete
- 0.5 day for report