

# GRCResponder

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# Current Timeline...

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- **Week 1:** Wrap up basic functions
- **Week 2 - 3: Integration**
  - Combine our branches and connect components
  - Deliverables: Full workflow prototype
- **Week 4 - 5: Testing & Refine performance**
  - Polish based on user testing
  - Deliverables: Numeric performance optimization, additional user features
- **Week 6 - 7: Continue bug fixes + Enhance documentations/report**
  - Deliverables: Working project on multiple queries, documents, and utility companies

# Document Retrieval

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## Current Status:

- Setting up database with subset of proceedings in order to create demo application
- Working on making web scraping processes more efficient and robust

## Query Expansion

- Time constraints with multiple LLM calls per query

# Search Engine Updates

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## Steps Forward

Initial Implementation of batch processing and threading

- Batch size of 3 proceedings
- Operating over 4 threads

Resolving bugs and fine tuning metadata collection

Creating validation set for embedding model and query accuracy

# LLM Updates

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## Current Status:

- LLM connected to both local and server chroma db
- Performed tests with scraped data using earlier, available version of web scraper
  - 1000 char chunks w/ 50 char overlap by default

## Ongoing Work:

- Improve retrieval and context usage

# LLM Updates

What info do you have on catalina island?

===== Ai Message =====

Tool Calls:

retrieve (0552c282-b8b6-4b47-879c-b252ebb08c0f)

Call ID: 0552c282-b8b6-4b47-879c-b252ebb08c0f

Args:

query: catalina island

===== Tool Message =====

Name: retrieve

Source: {'chunk\_index': 29, 'document\_id': '543831240', 'proceeding\_id': 'A2312011', 'Content': 3. "Application" refers to Application No. (A.)23-12-011, SCE's Application for Authority to, Among Other Things, Increase its Authorized Revenues for Gas Service for Santa Catalina Island and to Reflect that Increase in Rates filed with the Commission on December 15, 2023, and SCE's direct testimony, Exhibit SCE-01.

4. "CARE" refers to California Alternate Rates for Energy.

5. "Catalina" refers to Santa Catalina Island.

1 The Utility Reform Network filed a protest to SCE's Application but has not actively the proceeding.

A-1

6. "Catalina Gas" refers to SCE's gas utility on Catalina. Catalina Gas is a propane-fueled gas production and distribution system that serves approximately 1,400 residential and commercial customers who reside primarily in the city of Avalon.

7. "Catalina Gas GRC" refers to the CPUC proceeding A.23-12-011, docketed to consider SCE's Application.

8. "CPUC" or "Commission" refers to the California Public Utilities Commission.

- Demo prompt targeting

# LLM Updates

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===== Prompt 1 =====
PROMPT:
Based on the 2023 Safety Performance Metrics Report submitted by PG&E to the California Public Utilities Commission on April 1, 2024, summarize the purpose of this report, what safety metrics PG&E is required to track, how these metrics are used to improve safety performance, and any notable safety trends or improvements mentioned in the introduction. Please include information about how these metrics relate to executive compensation and risk-informed decision making.

===== AI Message =====
Based on the 2023 Safety Performance Metrics Report submitted by PG&E to the California Public Utilities Commission on April 1, 2024, here is a summary of the report's content:

**Purpose of the Report:**
The purpose of this report is to provide a comprehensive overview of PG&E's safety performance in 2023, as required by California law (Public Utility Safety Commission Rule 14, CCR § 1600 et seq.). The report aims to inform the public about PG&E's commitment to safety and its progress in achieving its safety goals.

**Required Safety Metrics:**
PG&E is required to track a set of safety metrics, including:

1. Work-related injuries (WRIs) and illnesses
2. Fatalities
3. Near misses (non-fatal injuries or illnesses that could have resulted in a WRI)
4. Environmental releases
5. Electrical fatalities and injuries

These metrics are used to assess PG&E's overall safety performance and identify areas for improvement.

**Improving Safety Performance:**
The report highlights several initiatives aimed at improving safety performance, including:

1. Enhanced training programs for employees
2. Improved fall protection systems
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- LLM is able to retrieve documents on a local database.
- Web Scraper targeted entirety of A.21-06-021
- Prompt is targeting [Pacific Gas and Electric Company's 2023 Safety Performance Metrics Report](#) specifically

# LLM Updates

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===== Human Message =====
What documents do you have access to?
===== Ai Message =====
Tool Calls:
  retrieve (60d8d6c8-b2eb-4123-a015-395ab48132ef)
    Call ID: 60d8d6c8-b2eb-4123-a015-395ab48132ef
    Args:
      query: all available documents
Retrieved 2 documents in 2.6690289974212646 seconds.
===== Tool Message =====
Name: retrieve

Source: {'chunk_index': 0, 'document_id': 4, 'document_type': 'APPLICATION', 'filed_by': 'San Diego Gas & Electric Company', 'filing_date': '2025-03-20'}
Content: Document: Application of San Diego Gas & Electric Company (U902M) for Authority to Establish Its Authority to Operate (U902M) for Authority to Establish Its Authority to Operate
Type: APPLICATION
Filed By: San Diego Gas & Electric Company
Filing Date: 2025-03-20

Source: {'chunk_index': 0, 'document_id': 3, 'document_type': 'AMENDMENT', 'filed_by': 'San Diego Gas & Electric Company', 'filing_date': '2025-03-24'}
Content: Document: Amendment to Test Year 2026 Cost of Capital Application of SDG&E (U902M) dated March 20, 2025
Type: AMENDMENT
Filed By: San Diego Gas & Electric Company
Filing Date: 2025-03-24
===== Ai Message =====
I have access to two documents:

1. An "Application" document with the title "Application of San Diego Gas & Electric Company (U902M) for Authority to Establish Its Authority to Operate (U902M) for Authority to Establish Its Authority to Operate"
2. An "Amendment" document with the title "Amendment to Test Year 2026 Cost of Capital Application of SDG&E (U902M) dated March 20, 2025"

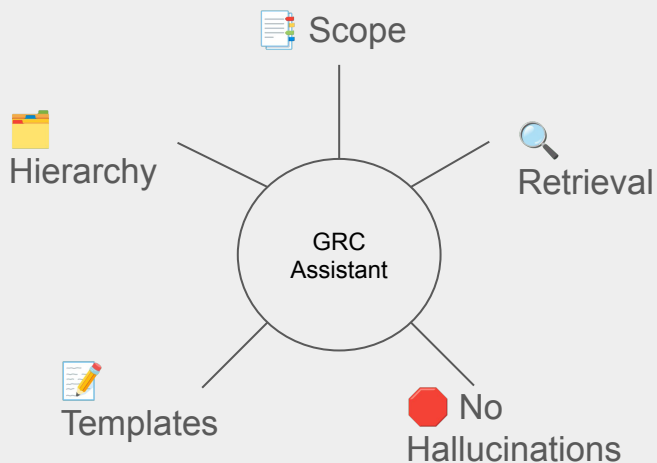
Please note that these documents are related to a specific proceeding, with proceeding numbers and IDs. If you're interested in more information, please provide the proceeding numbers and IDs.

=====
LLM + Retrieval call took 39.72 seconds
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```

- LLM is also to retrieve documents on azure hosted database.



# LLM Updates



## System Prompt Updates:

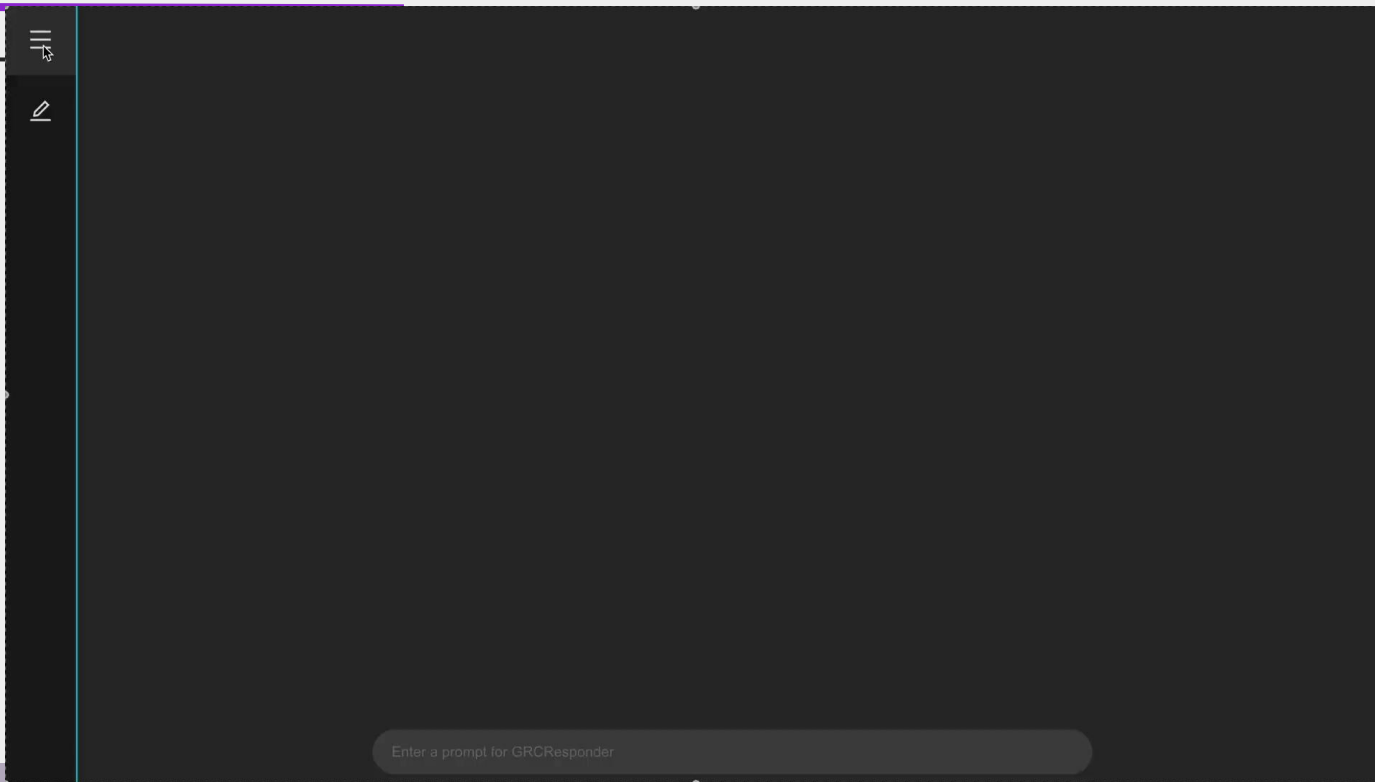
- **Scope tightened to CPUC GRC only** – automatic polite refusal for off-topic requests.
- **Explicit three-level evidence order** – *user docs* → *vector DB* → *static memory*; asks follow-ups if data missing.
- **Response templates standardized** – Q&A, consistency table, or draft filing with inline citations.
- **Hallucination guardrails added** – zero fabricated facts; numerical values cross-checked or flagged “unknown.”
- **Tone & formatting defined** – concise, professional, no jargon; always end with “Need more detail?” prompt.

# Web Updates

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- PDF Viewer complete with react-pdf-viewer
- Chats and data write to postgresql database
  - need to merge migrations with the azure hosted database

# Web Updates



# Next Steps

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- **Coming up**
  - Connect the LLM with the frontend
    - Conduct E2E Tests
  - Continue improving LLM and search engine
  - Begin work on research paper
    - **? What paper should we cater towards?**

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# Questions?

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