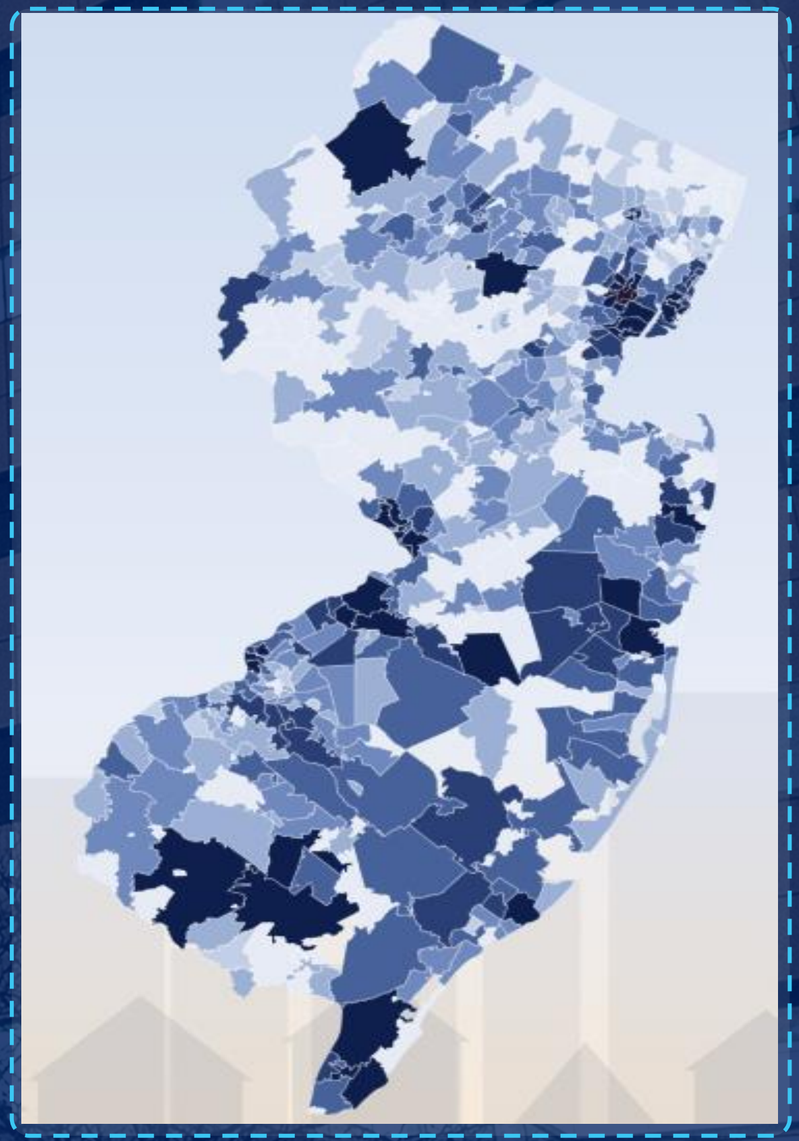
HERF · HOMELESSNESS ECONOMIC RISK FRAMEWORK

THE FUTURE OF HOUSING

Using Generative AI to Predict Housing Instability and Model Solutions



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Our Agenda For Today

1. **The Challenge**
   Why NJ needed an early-warning tool to predict housing stability
2. **Introducing HERF**
   What it measures and how it works
3. **Use Case: Federal Funding Changes**
   Modeling the impact on New Jersey households
4. **Guardrails & Roadmap**
   Setting guardrails and next steps

THE CHALLENGE

What changes with HERF

The same questions, answered before the budget is set.

TODAY

We learn about a crisis from shelter counts, after it has happened

“What if this gets cut?” means a data request and a long wait

Rent, eviction and homelessness data sit in separate places

Each office estimates the impact its own way

Decisions rest on statewide averages

WITH HERF

- **Warning signs show up by ZIP code before people reach a shelter**
- **Ask the question in plain English and get an answer the same day**
- **One framework joins public data with DCA’s own records**
- **Everyone works from the same tested models and definitions**
- **Results by county, legislative district, ZIP code and Continuum of Care**

Introducing HERF

HOMELESSNESS ECONOMIC RISK FRAMEWORK

INTRODUCING HERF

The Homelessness Economic Risk Framework is an early-warning system built in-house at NJ DCA. It shows where housing instability is building, and tests how policy changes could affect it, before it shows up in shelter counts.

1

FORWARD-LOOKING

Spots strain early

Tracks monthly rent, inflation and eviction signals alongside lasting factors such as income, so risk appears before it reaches shelters.

2

EASILY INTERPRETABLE

Works at the level you do

Scores every NJ ZIP code and rolls results up to counties, legislative districts and Continuums of Care, in plain language.

3

DEFENSIBLE

Built on trusted data

Joins open federal and market data with DCA's own homelessness records. Forecasts are tested against actual outcomes.

4

DECISION-ORIENTED

Tests "what if"

Runs named policy scenarios to estimate how a cut, or a response, would shift housing pressure and where.

Four design principles, each built into how HERF works.

How HERF measures risk: Two Scores, Two Questions

1 Homelessness Risk Score

Where is the need today?

BUILT FROM

How many people entered the homelessness system from each ZIP code

SHOWS

Each ZIP ranked against the rest of the state

UPDATED

Once a year

2 Housing-Pressure Index

Where is financial strain on households growing?

Four strain signals for every ZIP code, and it responds to “what if” policy scenarios.

SIGNAL	THE QUESTION IT ANSWERS	A HOUSEHOLD UNDER STRAIN
Eviction pressure	Are eviction filings rising?	A family behind on rent that has received a court notice
Rent strain	Are rents rising faster than incomes?	A worker whose rent keeps rising faster than their pay
Mortgage distress	Are homeowners falling behind?	A retiree on a fixed income who has missed payments
Cost burden	Are more households overspending on housing?	A single parent for whom one car repair breaks the budget

One tells you where the need is now. The other warns you where it’s heading. Neither is a count of people experiencing homelessness.

How it works

DATA

- Zillow Observed Rent Index.
- Consumer Price Index.
- Eviction filings (2022-2025).
- Mortgage distress and housing cost burden (Census ACS).
- HUD Housing Choice Voucher data.
- DCA data: de-identified HMIS records.
- Program and Continuum of Care geography.

MODELS

- Housing-pressure index.
- Homeless-system flow models (county and ZIP).
- Statewide inflow forecast.
- Funding exposure: how much HUD homeless-program money each CoC could lose under new federal funding rules.

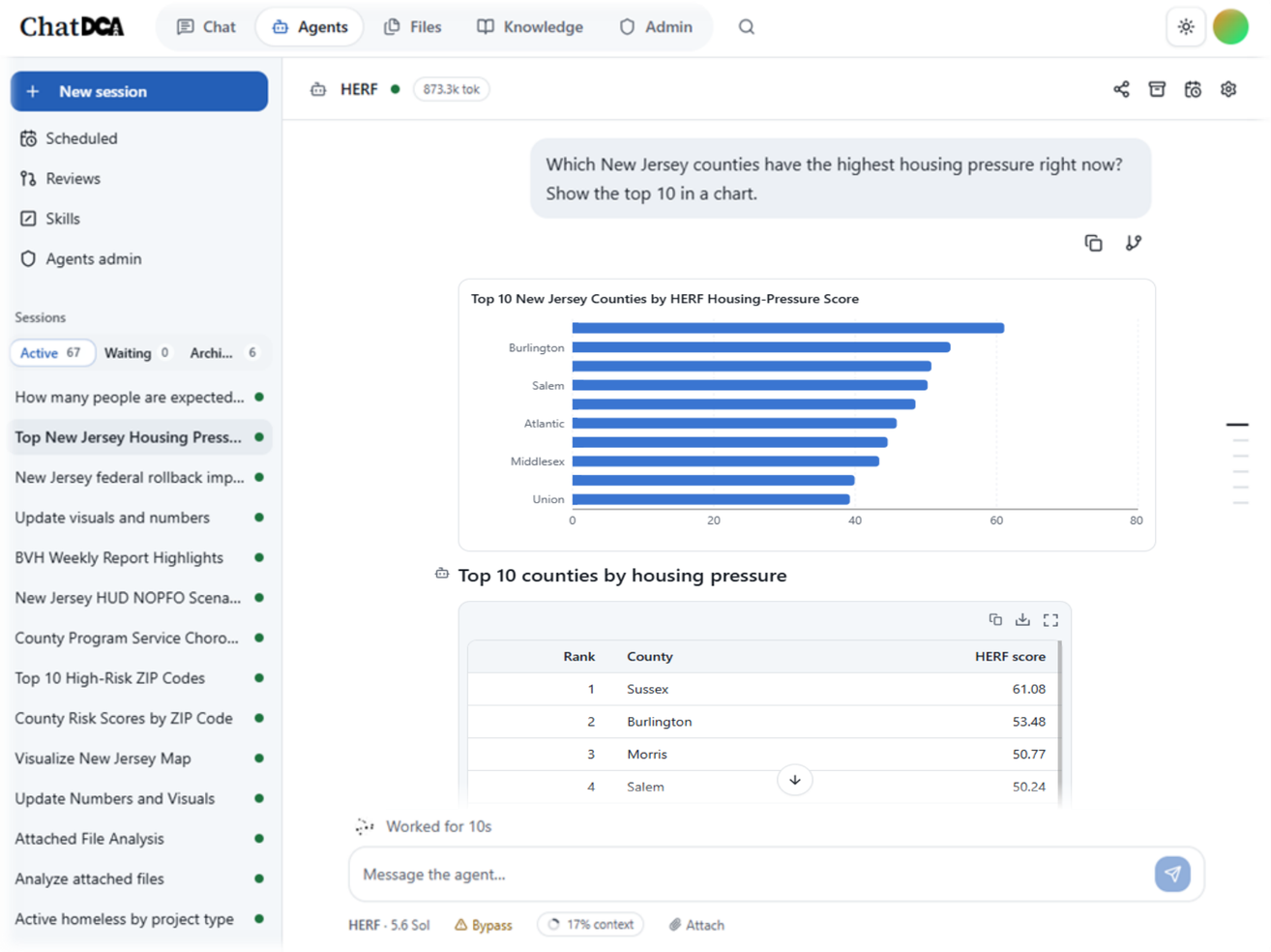
SERVICE

- A secure calculation service.
- HERF performs the calculations.
- GPT-based artificial intelligence inference on Azure / AWS Govcloud

CONVERSATION

- Ask in your own words through our DCA's own interface – ChatDCA. The assistant picks the right model, runs it and explains the result.
- Adds caveats and says so when a questions goes beyond the data.

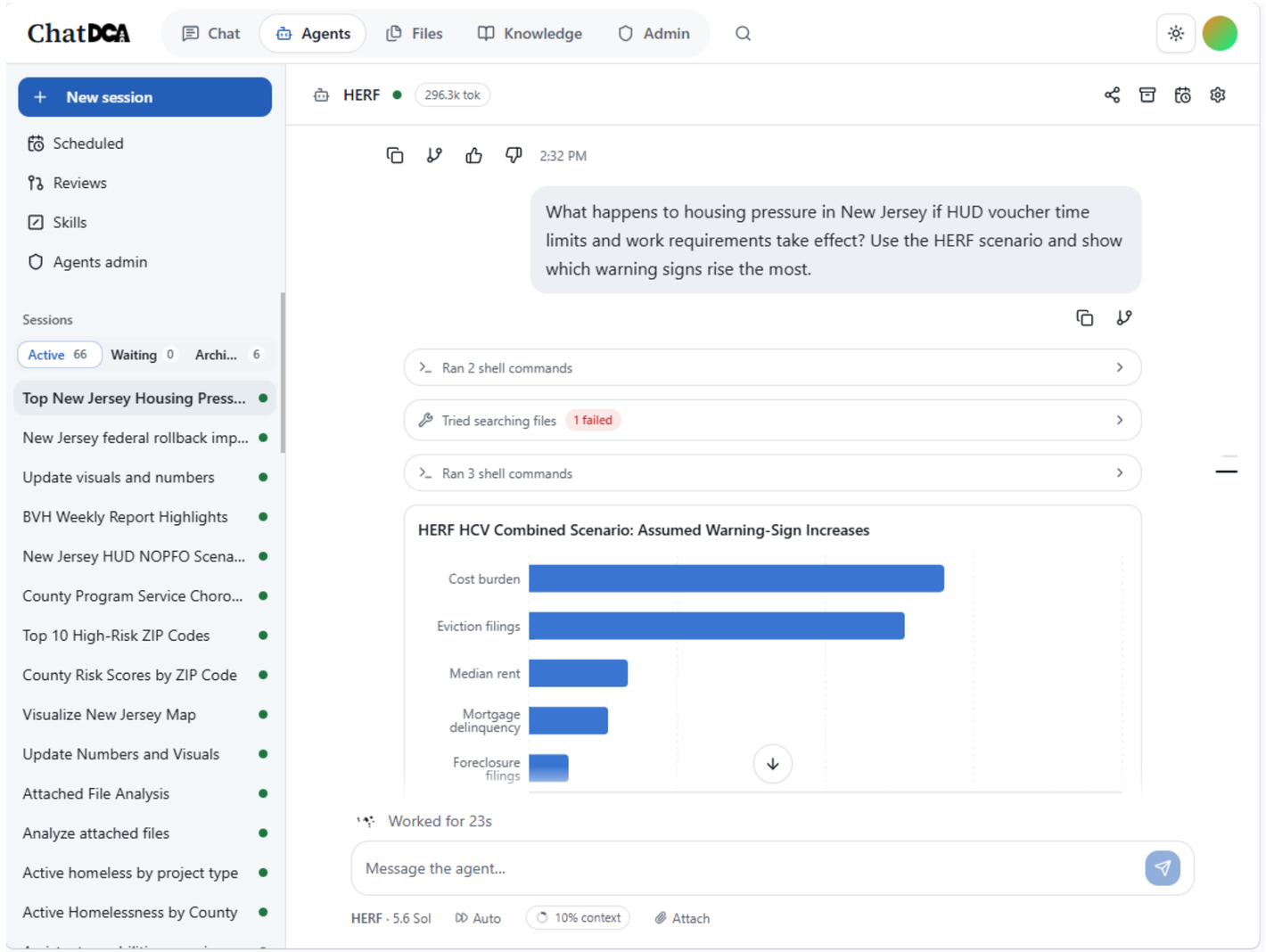
QUESTIONS HERF CAN ANSWER



Where is the pressure building?

Tracks rent, eviction, mortgage and cost-burden signals in every ZIP code.

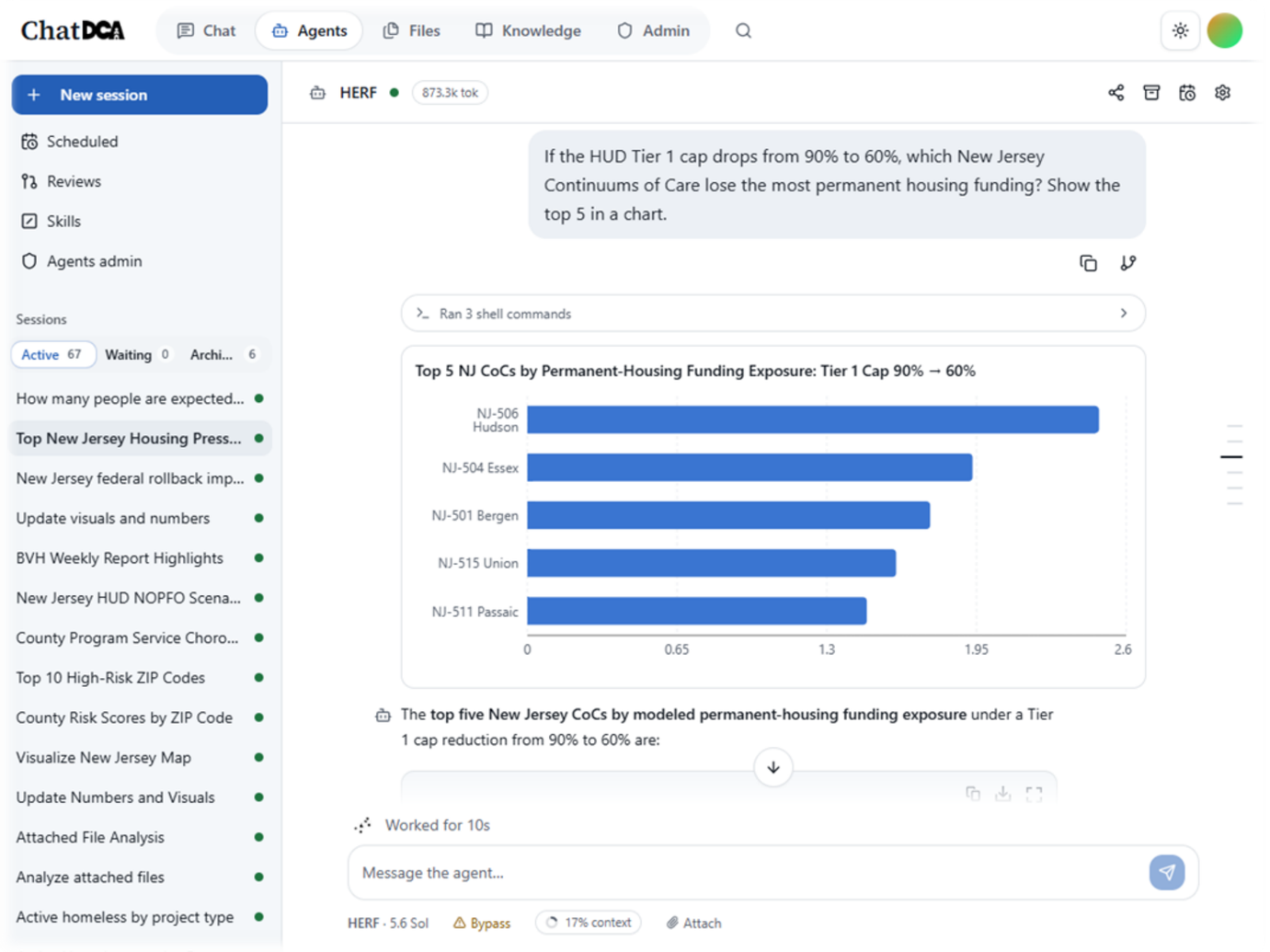
QUESTIONS HERF CAN ANSWER



What if a policy changes?

Runs federal, state and economic scenarios and shows which pressures rise.

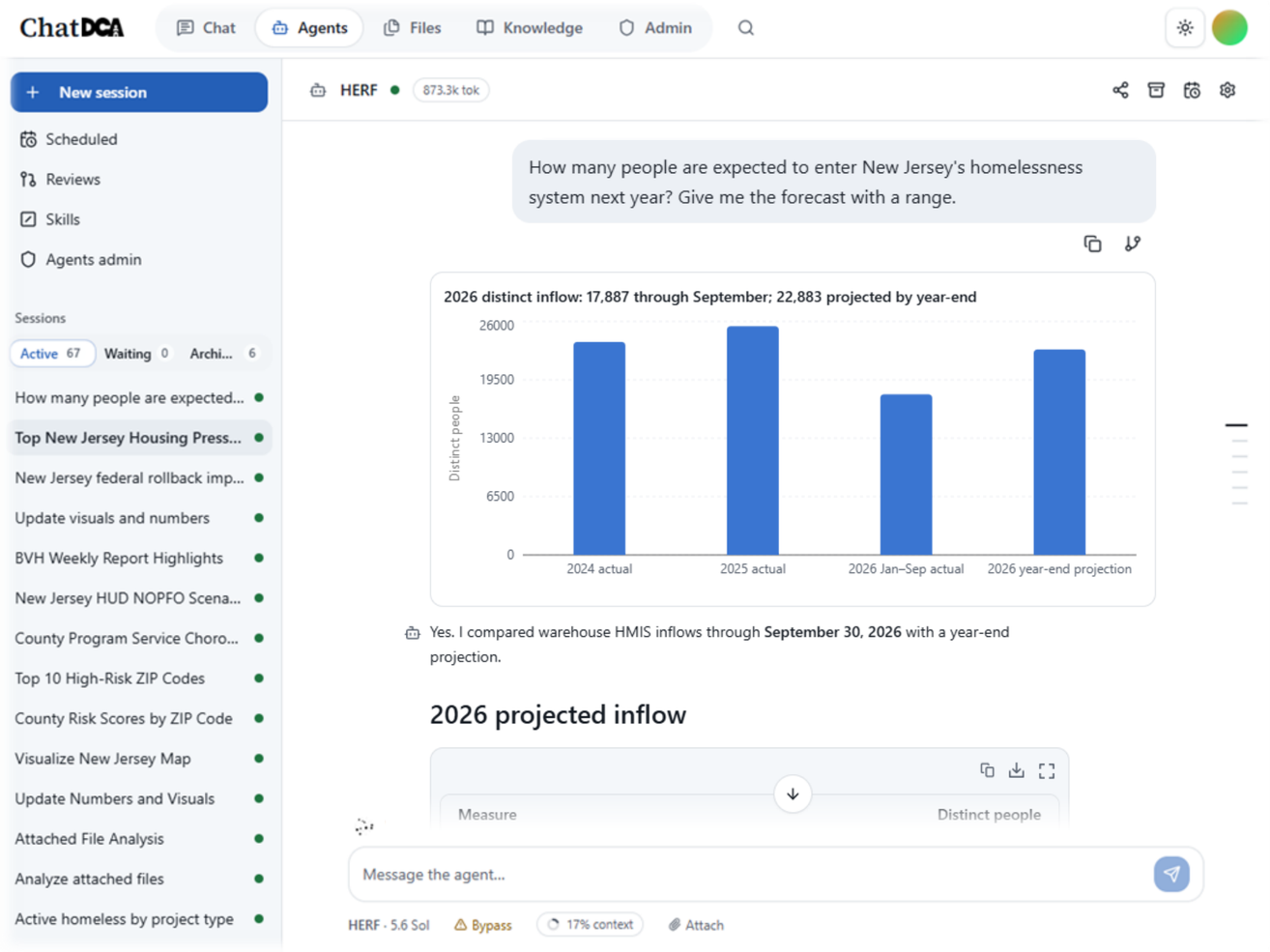
QUESTIONS HERF CAN ANSWER



What funding is at risk?

Estimates the federal homelessness funding each local system could lose.

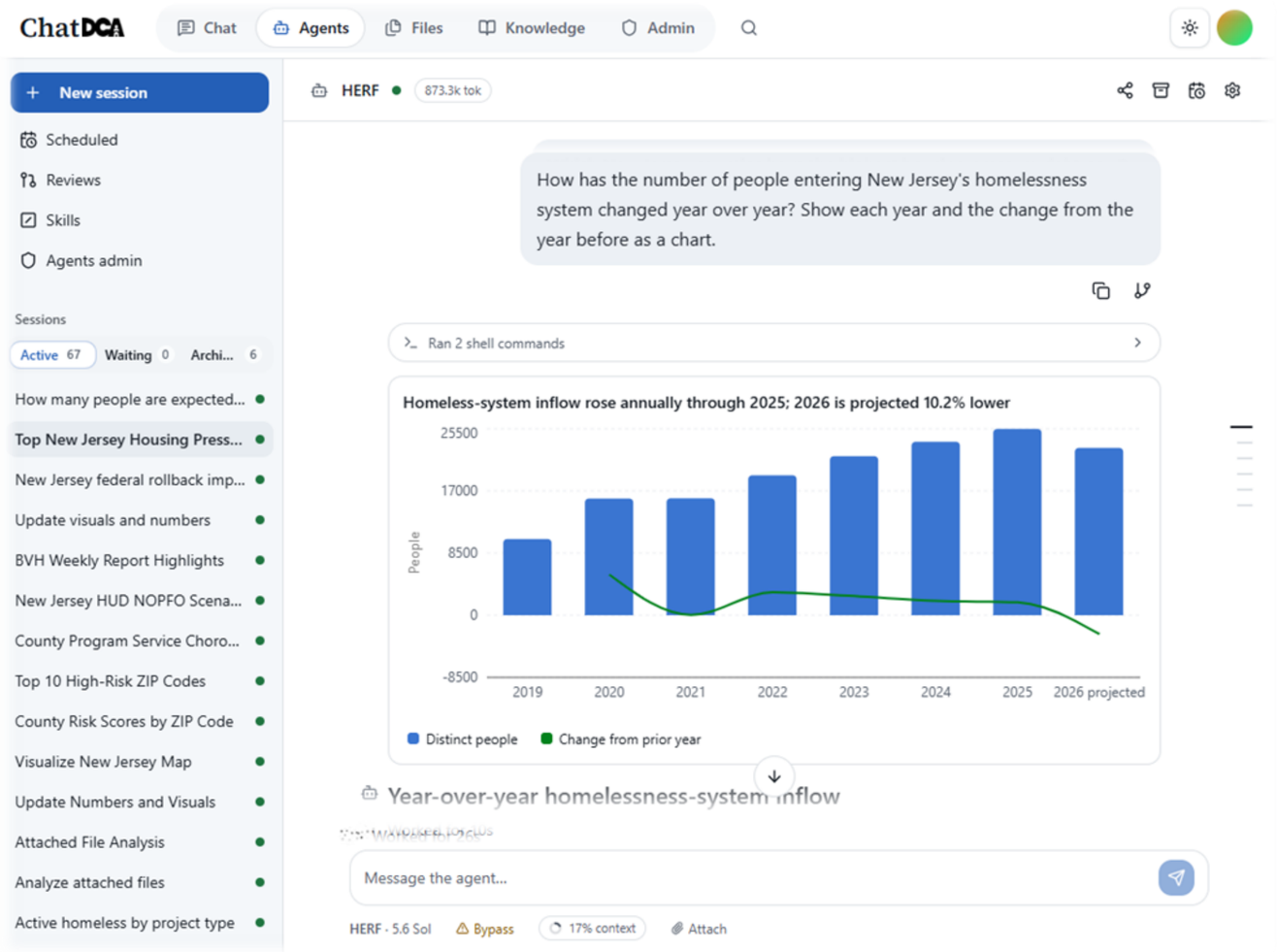
QUESTIONS HERF CAN ANSWER



How many will need help?

Forecasts how many people will enter the homelessness system, with a range.

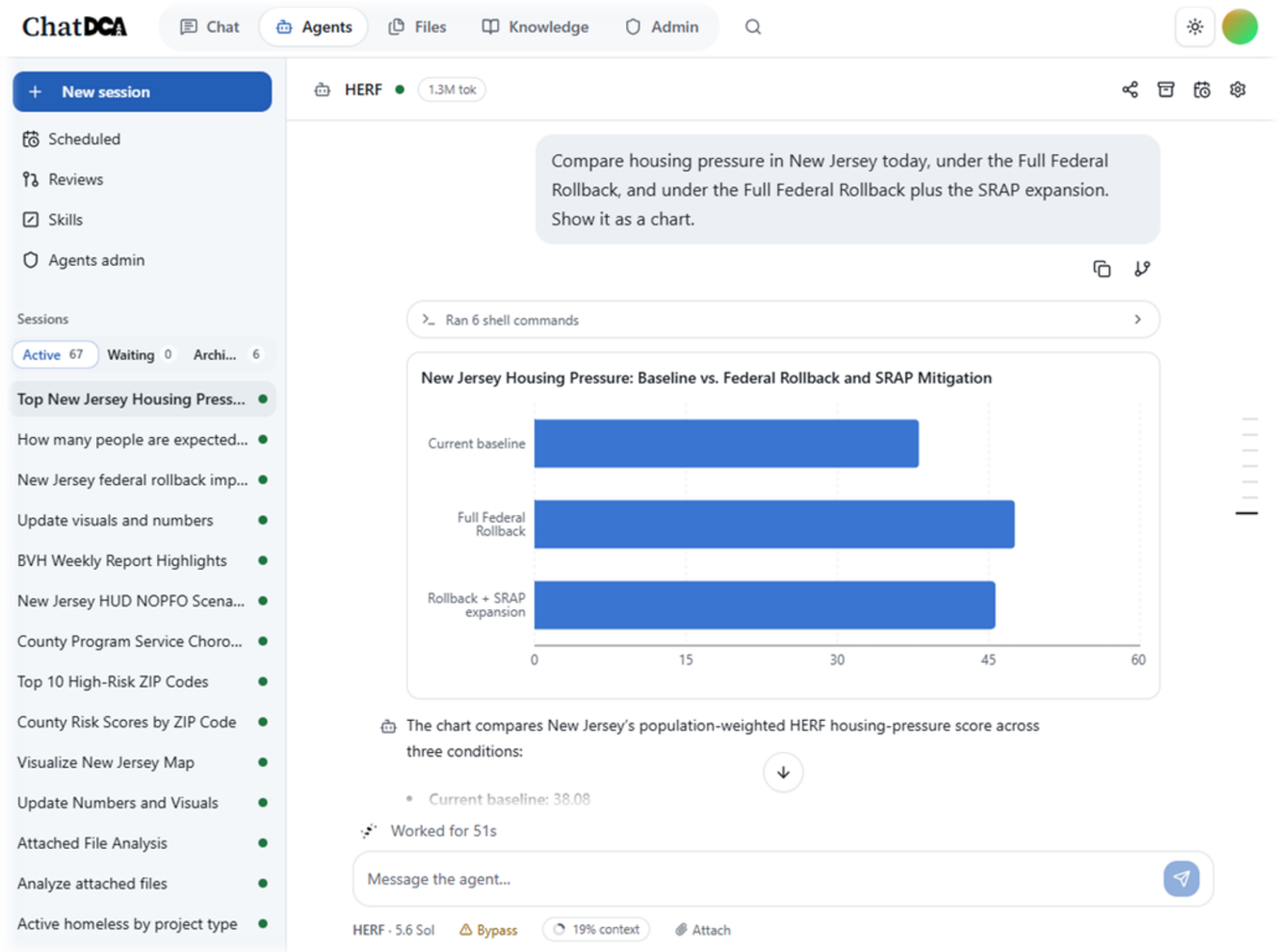
QUESTIONS HERF CAN ANSWER



Compare Year over Year Trends

HERF tracks how pressure trends over time, not just a snapshot.

QUESTIONS HERF CAN ANSWER



What would help?

Compares state responses, such as more rental assistance, against the cuts.

Use Case: Modeling Federal Funding Changes for New Jersey's Homelessness Response

What the HUD Continuum of Care Tier 1 cap could mean for the state's housing system

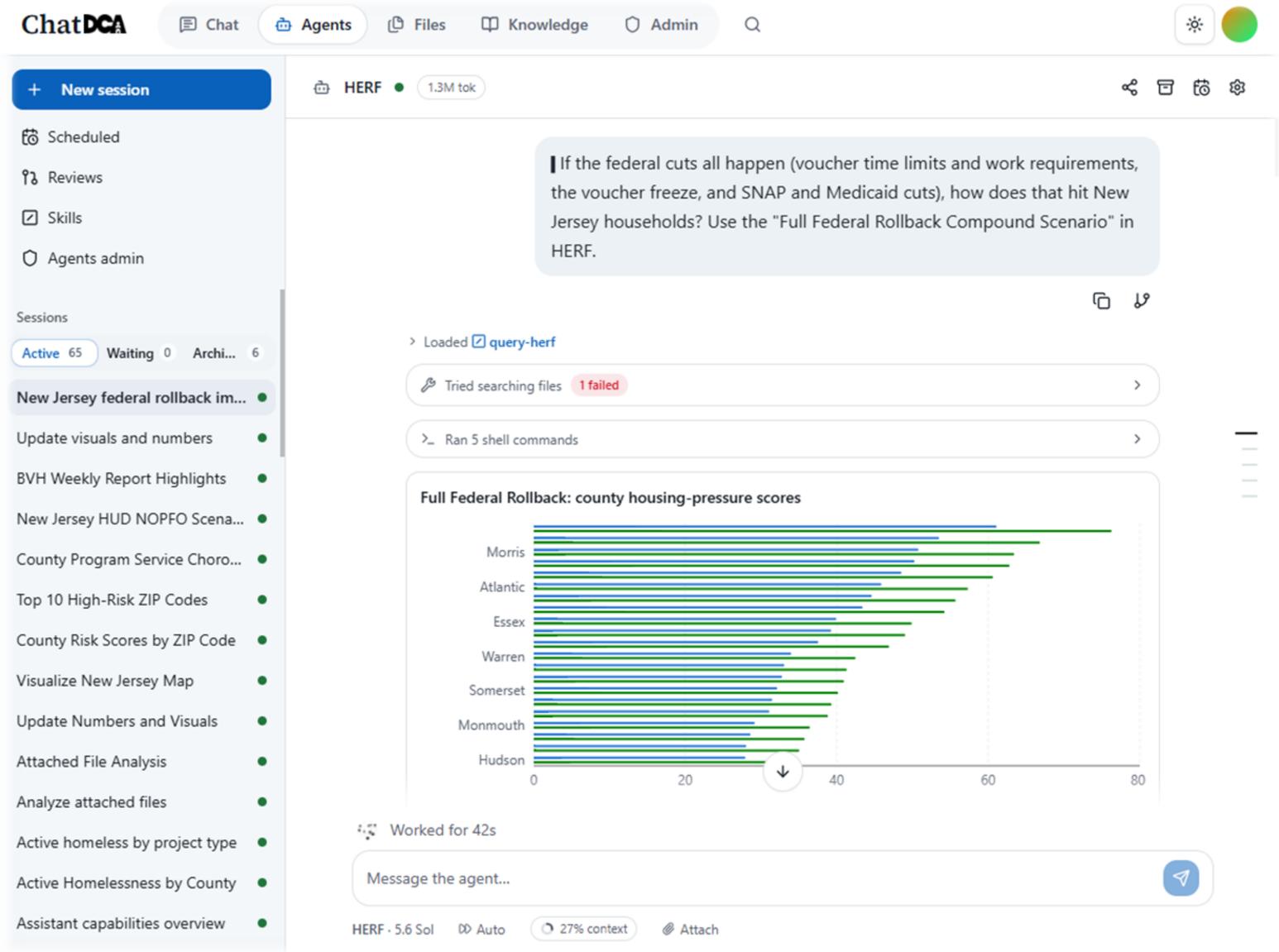
USE CASE

The scenario: What if the federal “Skinny budget” take effect?

WHAT CHANGES	WHO IS HIT, AND HOW	STATUS
Voucher time limits & work requirements	**About 27,900 NJ voucher households** could lose rental assistance after a time limit or for missing required work hours.	PROPOSED
Voucher freeze	When a family leaves the voucher program, **no new family takes its place.**	PROPOSED
SNAP & Medicaid cuts	**About 173,000 New Jerseyans** could lose Medicaid when work requirements start in January 2027. Less help with food and healthcare leaves less for rent.	LAW SINCE JULY 2025

We bundled all three into one HERF scenario: “Full Federal Rollback”

HERF in action

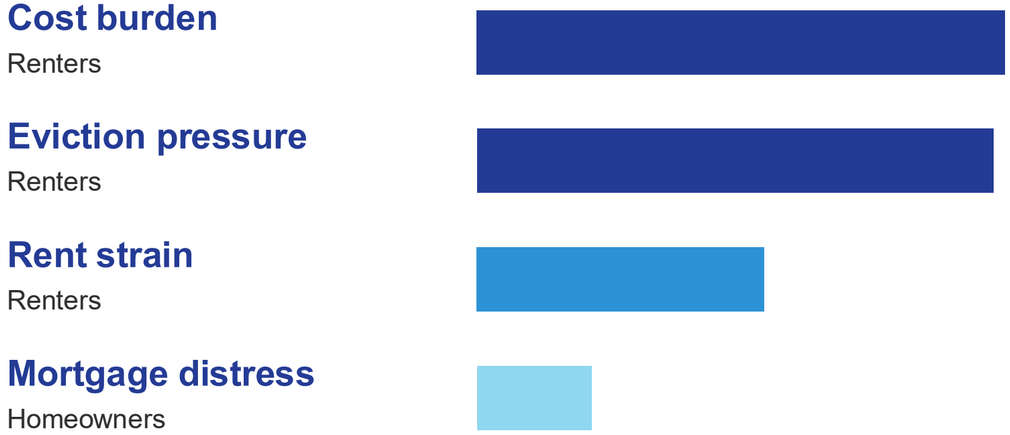


WHAT HERF SHOWS

Renters feel it first, and more people may need help

1 Which pressures rise

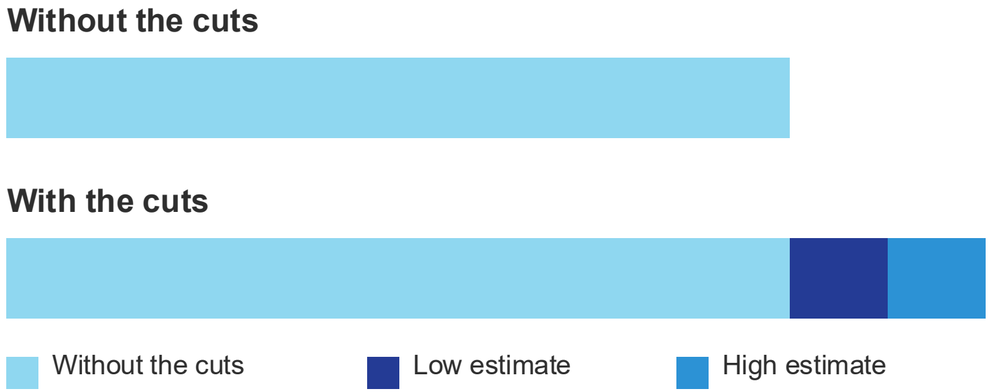
Change in each warning sign under the federal cuts



Biggest increases hit renters: cost burden and eviction pressure.

2 How many may need help

People entering the homelessness system each year



A planning range, not a prediction: inflow rises half as fast as housing pressure, or just as fast.

What it means for leaders: Eviction prevention and rental assistance are the first line of defense.

WHAT HERF SHOWS

Every county feels it, and federal funding is exposed

1 Where funding is at risk

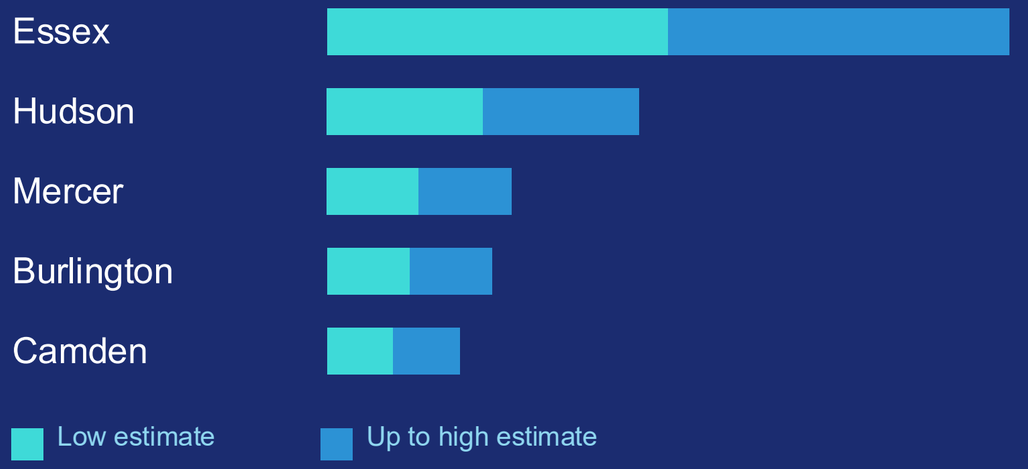
Permanent housing renewals exposed, by Continuum of Care



Estimated exposure, not confirmed losses.

2 Where more people may need help

Additional people entering the system, top five counties



Pressure rises in all 21 counties, largest where need is highest.

Ask about your area: any county, ZIP code, legislative district or Continuum of Care.

HERF tells us Short and Long term effects

SHORT TERM

Now to the next 12 months

- **Where pressure is building now**
  Monthly rent, inflation and eviction signals for every ZIP code
- **Which households feel it first**
  The warning signs a policy change pushes, and who they hit
- **What funding is at risk this cycle**
  Federal homelessness dollars each local system could lose
- **How many people may need help next year**
  A forecast of people entering the homelessness system

Use it for: Budget planning and resource allocation

LONG TERM

As policies phase in over several years

- **How pressure builds as cuts phase in**
  Scenarios that layer federal changes as they take effect
- **Which communities are most vulnerable**
  Lasting factors such as income and economic stress
- **Whether conditions improve or worsen**
  Trends by county and statewide over time
- **Which responses make a lasting difference**
  State options, such as rental assistance, compared side by side

Use it for: Prevention strategy and policy planning

One analysis, three audiences

1

Senior leaders

Statewide priorities

WHAT HERF GIVES THEM

Statewide housing-pressure trends, funding exposure, and modeled policy responses.

“Housing pressure rises XX% under the modeled federal cuts.”

2

Legislators

Their constituents

WHAT HERF GIVES THEM

Anticipated impacts by legislative or congressional district, using where people last lived.

“NJ-XX ranks 1st of 12 districts for housing pressure under the cuts.”

3

Advocates and CoCs

Their system and their funding

WHAT HERF GIVES THEM

Expected dollar exposure for each local homeless system, and scenario comparisons.

“Hudson County’s homeless system: $X M in permanent housing at risk.”

Same analysis, same numbers. HERF rewrites it for each audience on request: “Rewrite this as a one-page brief for LD 29.”

GUARDRAILS

Guardrails make the analysis defensible

HERF can say

- Which pressures a policy pushes, how hard, and where
- How many people are forecasted to enter the system, with a range
- Where is homelessness rising from
- Expected dollar exposure from federal funding changes

With more data

- Shelter-capacity scenarios
- Subgroup breakdowns (veterans, youth, families)

HERF won’t say

- Anything about an individual person
- Ranking ZIPs by number of homeless people based on the pressure index

When you ask for something it can’t support, HERF says so, explains why, and offers what it can answer.

YOUR ROADMAP

What it takes to build a tool like HERF

1 Start with a question

Identify a recurring policy or operational question that needs answering.

2 Define the measures

Establish consistent definitions so everyone interprets the results the same way.

3 Bring together the data

Combine public data with relevant DCA program data.

4 Validate the results

Test model outputs against historical data to understand accuracy and limitations.

5 Connect AI to the model

The AI interprets and explains; validated models do the math.

6 Communicate limitations

Configure to explain assumptions, confidence levels, and what the model cannot determine easily.

ROADMAP

Next steps for HERF

Linking Scenarios to Counts

Estimating how unknown policy effects could impact homelessness system entries and the Housing-Pressure Index.

Rebalancing the Housing-Pressure Index

Updating the weighting of housing-pressure indicators as new data becomes available.

Subgroups

Developing population-specific results for veterans, youth, and families.

Live Data Connections

Reduces the need for manual data refreshes.

THANK YOU

Questions and Discussion



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