GOLDENSTATENET

Project 12 | Kern Overview Packet

January 31, 2022

This map identifies the initial 18 broadband project areas and the network solutions proposed by the Third Party Administrator (TPA), GoldenStateNet, which build upon the California Public Utilities Commission (CPUC) recommended routes. Highlighted in this packet are the solutions identified for the Kern Project and other geospatially registered data sets which influenced them.

Project 12 | Kern Summary

The eastern Kern region comprises one of the least-served parts of California; a rural, low-income area with a large percentage of households lacking any Internet connectivity. Its cell service is poor, adversely impacting remote learning, area hospitals, clinics, and emergency services.

GoldenStateNet's proposed solution for the area calls for a new buildout along with existing open access fiber broadband on Highway 178 that combines solutions including a section that will be secured with a long-term Indefeasible Right of Use (IRU) dark fiber lease. The proposed 92-mile route between Bakersfield and Inyokern completes an east/west connection between two existing north/south open access fiber paths, adding a layer of resiliency to the area network.

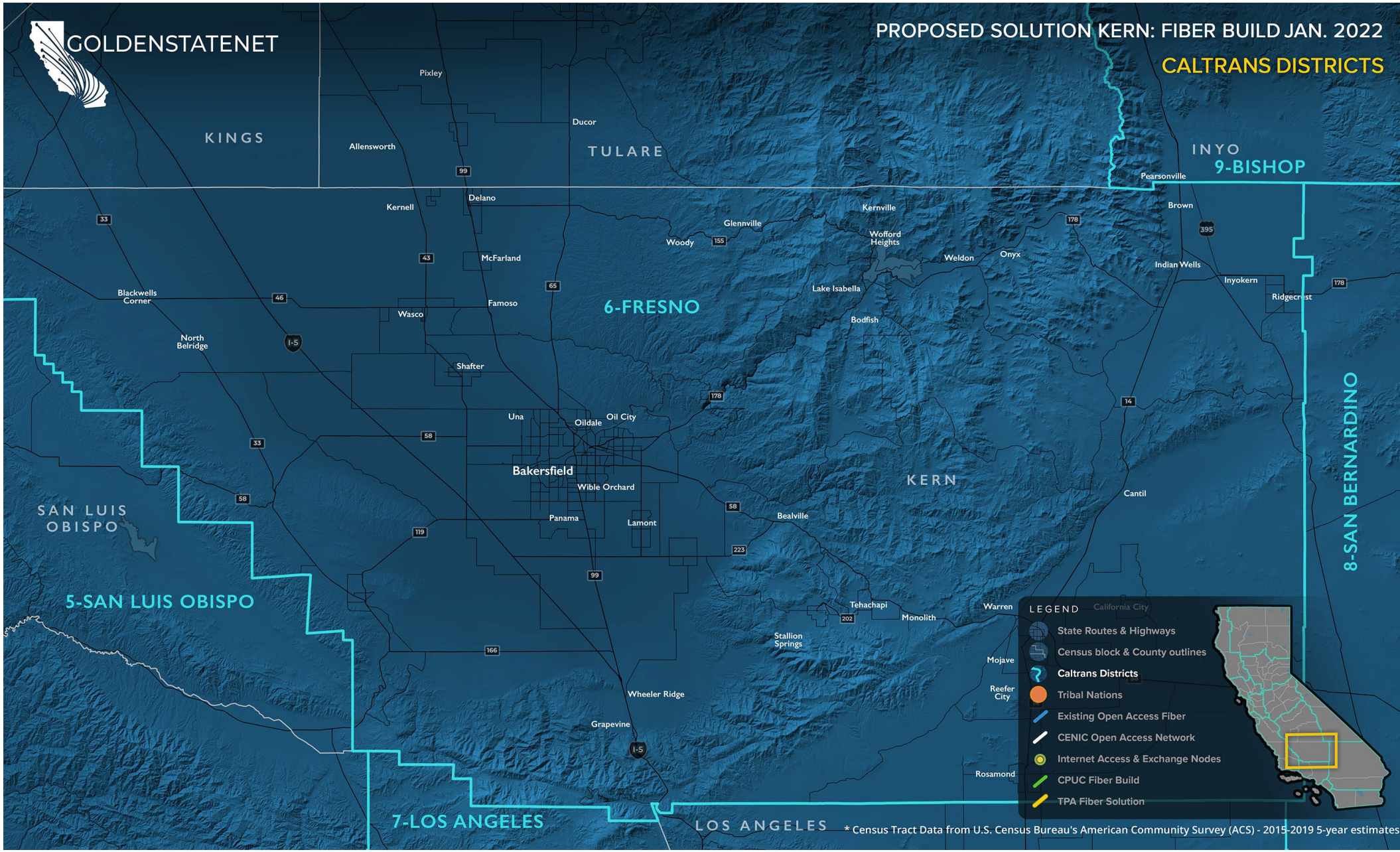
Project 12 | Kern Highlights

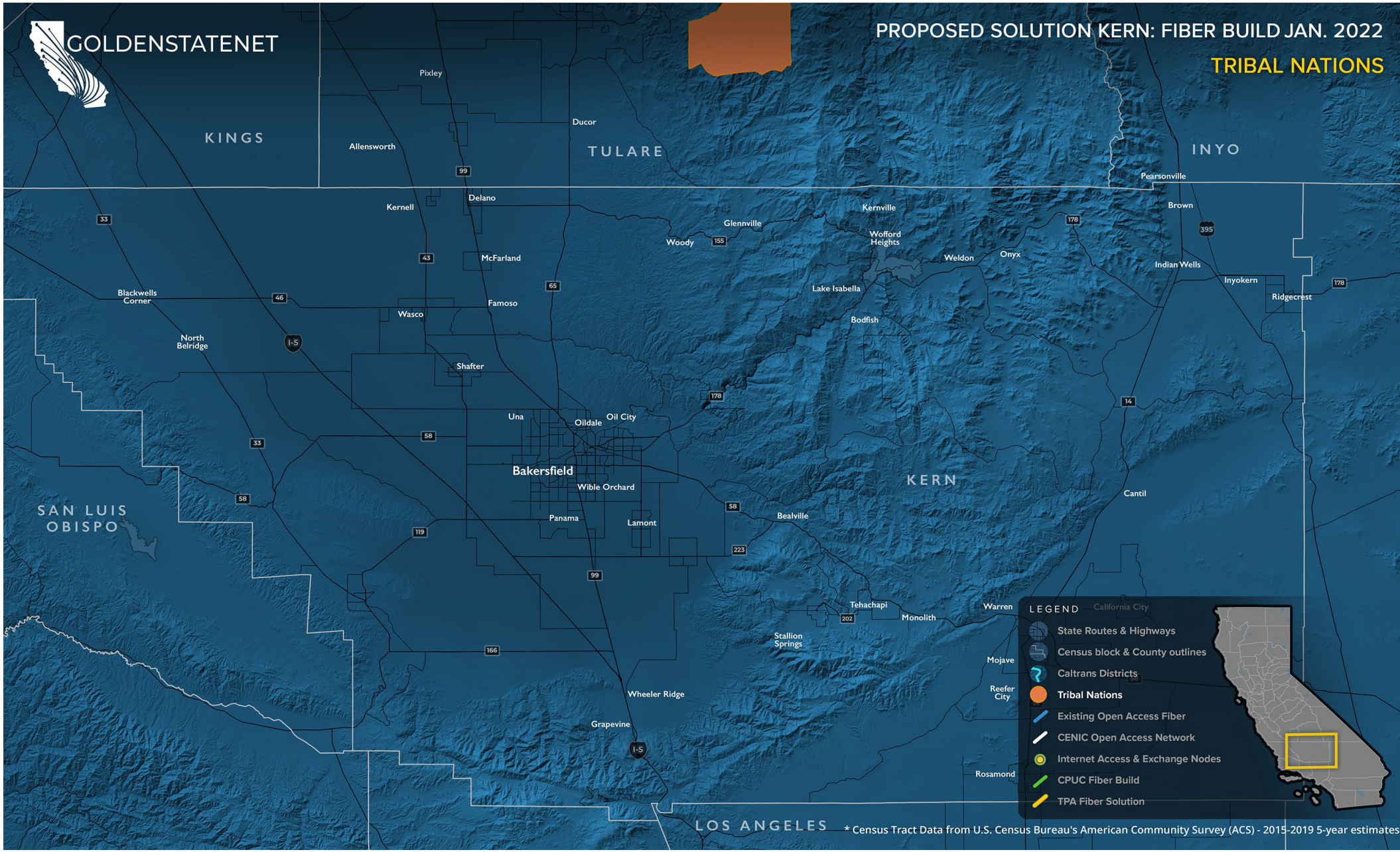
Type of Solution:	New Construction Fiber Build Indefeasible Right of Use (IRU) dark fiber lease
Highways/Routes:	178
Approximate Fiber Miles:	92
Quantity of Fibers:	288
Approximate Start Date:	2022
Regional Broadband Consortium:	Western Kern - San Joaquin Regional BroadbandConsortium
Regional Transportation Planning Agency (RTPA) & Metropolitan Planning Organization (MPO):	Kern Council of Governments

GoldenStateNet Maps

The appended maps share detailed visualizations of the GoldenStateNet (TPA) recommended middle-mile network solutions. The maps illustrate the complex geographical, topological, technological, and socioeconomic landscape of California.

In combination with available network assets and regional partnerships, the map data has helped to directly inform GoldenStateNet's well-considered proposals.


GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
CALTRANS DISTRICTS
KINGS
TULARE
INYO
9-BISHOP
6-FRESNO
KERN
8-SAN BERNARDINO
SAN LUIS OBISPO
5-SAN LUIS OBISPO
7-LOS ANGELES
LOS ANGELES
Pixley
Ducor
Allensworth
Delano
Kernell
Kernville
Glennville
Woody
Wofford Heights
Weldon
Onyx
Pearsonville
Brown
Indian Wells
Inyokern
Ridgecrest
Lake Isabella
Bodfish
Blackwells Corner
Famoso
Wasco
North Belridge
Shafter
McFarland
Una
Oildale
Oil City
Bakersfield
Wible Orchard
Panama
Lamont
Bealville
Cantil
Tehachapi
Monolith
Warren
Stallion Springs
Mojave
Reefer City
Wheeler Ridge
Grapevine
Rosamond
I-5
99
33
43
46
65
58
119
223
155
178
395
14
202
166
LEGEND
California City
State Routes & Highways
Census block & County outlines
Caltrans Districts
Tribal Nations
Existing Open Access Fiber
CENIC Open Access Network
Internet Access & Exchange Nodes
CPUC Fiber Build
TPA Fiber Solution
* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates


GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
TRIBAL NATIONS
KINGS
TULARE
INYO
KERN
SAN LUIS OBISPO
LOS ANGELES
Pixley
Ducor
Allensworth
Pearsonville
Kernell
Delano
Kernville
Brown
Glennville
Woody
Wofford Heights
Weldon
Onyx
Indian Wells
Inyokern
Ridgecrest
Lake Isabella
Bodfish
Blackwells Corner
Famoso
Wasco
McFarland
North Belridge
Shafter
Una
Oildale
Oil City
Bakersfield
Wible Orchard
Panama
Lamont
Bealville
Cantil
Tehachapi
Monolith
Warren
Stallion Springs
Mojave
Reefer City
Wheeler Ridge
Grapevine
Rosamond
LEGEND
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Internet Access & Exchange Nodes
CPUC Fiber Build
TPA Fiber Solution
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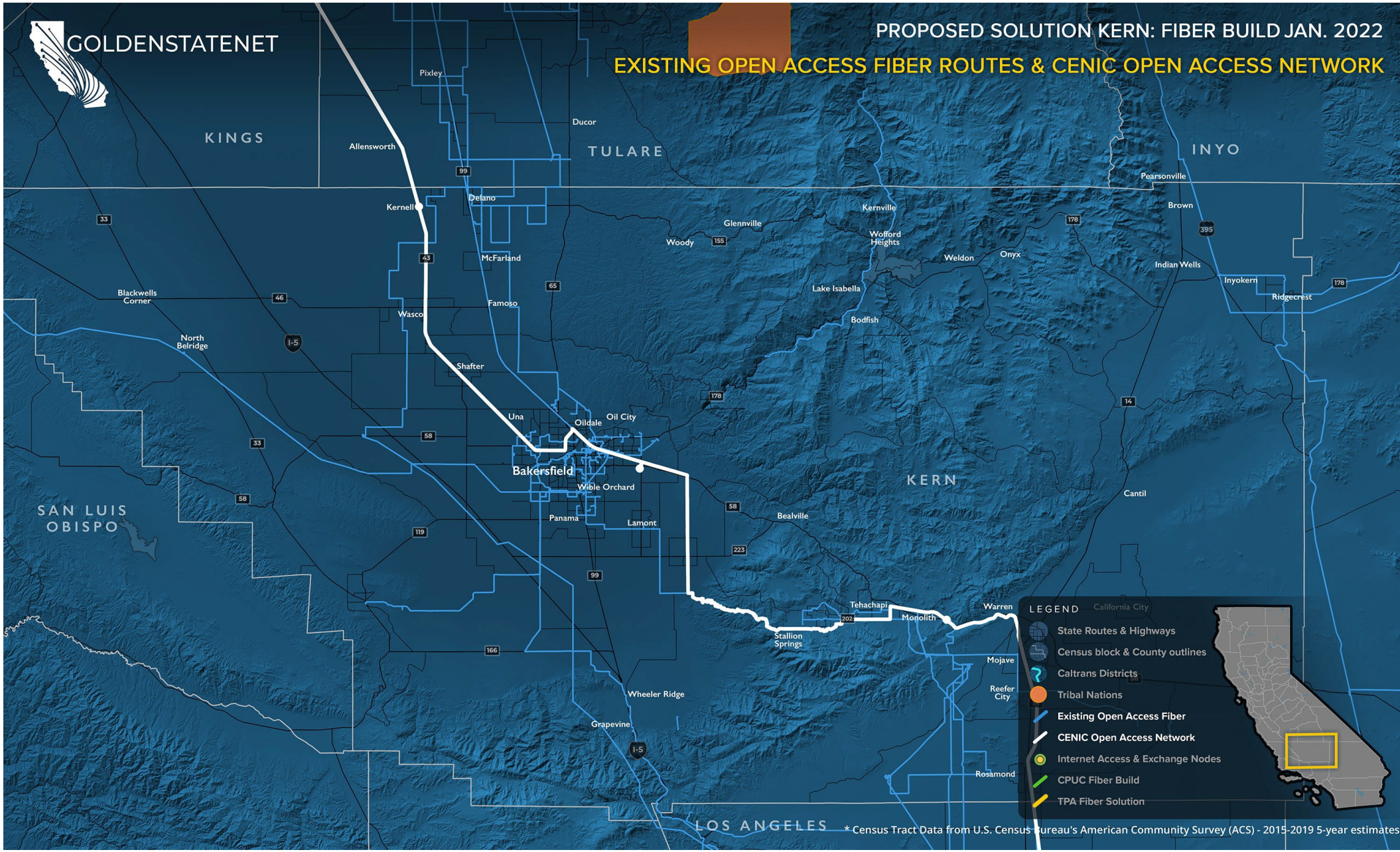
GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
EXISTING OPEN ACCESS FIBER ROUTES & CENIC OPEN ACCESS NETWORK
KINGS
TULARE
INYO
KERN
SAN LUIS OBISPO
LOS ANGELES
Pixley
Ducor
Allensworth
Kernell
Delano
McFarland
Famoso
Wasco
Blackwells Corner
North Belridge
Shafter
Una
Oildale
Oil City
Bakersfield
Wible Orchard
Panama
Lamont
Bealville
Cantil
Tehachapi
Warren
Monolith
Stallion Springs
Mojave
Reefer City
Wheeler Ridge
Grapevine
Rosamond
Kernville
Glennville
Woody
Wofford Heights
Weldon
Onyx
Lake Isabella
Bodfish
Pearsonville
Brown
Indian Wells
Inyokern
Ridgecrest
LEGEND
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Caltrans Districts
Tribal Nations
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CENIC Open Access Network
Internet Access & Exchange Nodes
CPUC Fiber Build
TPA Fiber Solution
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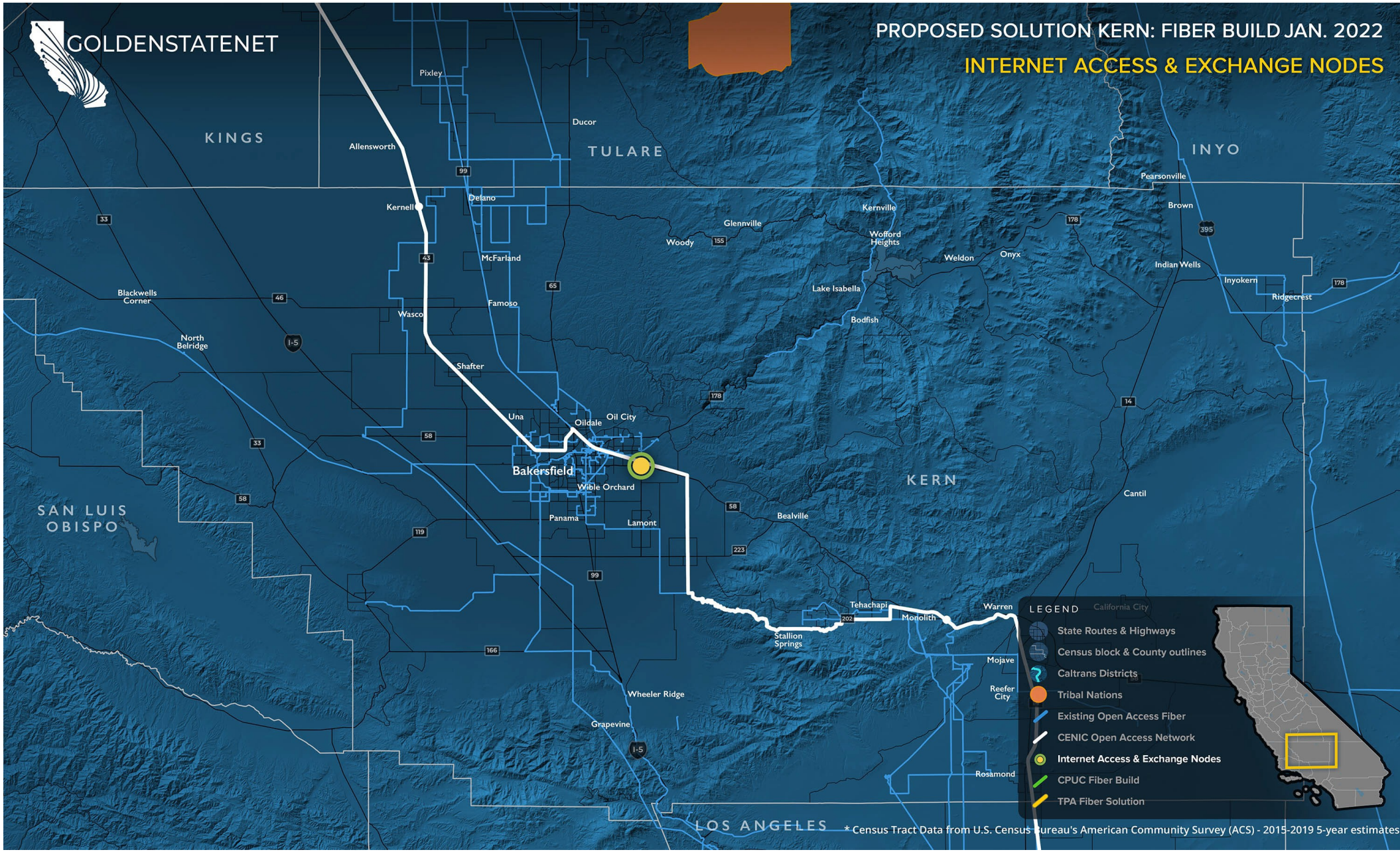
GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
INTERNET ACCESS & EXCHANGE NODES
KINGS
TULARE
INYO
KERN
SAN LUIS OBISPO
LOS ANGELES
Pixley
Ducor
Allensworth
Kernell
Delano
McFarland
Famoso
Wasco
Shafter
Blackwells Corner
North Belridge
Una
Oildale
Oil City
Bakersfield
Wible Orchard
Panama
Lamont
Bealville
Cantil
Tehachapi
Warren
Monolith
Stallion Springs
Mojave
Reefer City
Wheeler Ridge
Grapevine
Rosamond
Glennville
Woody
Kernville
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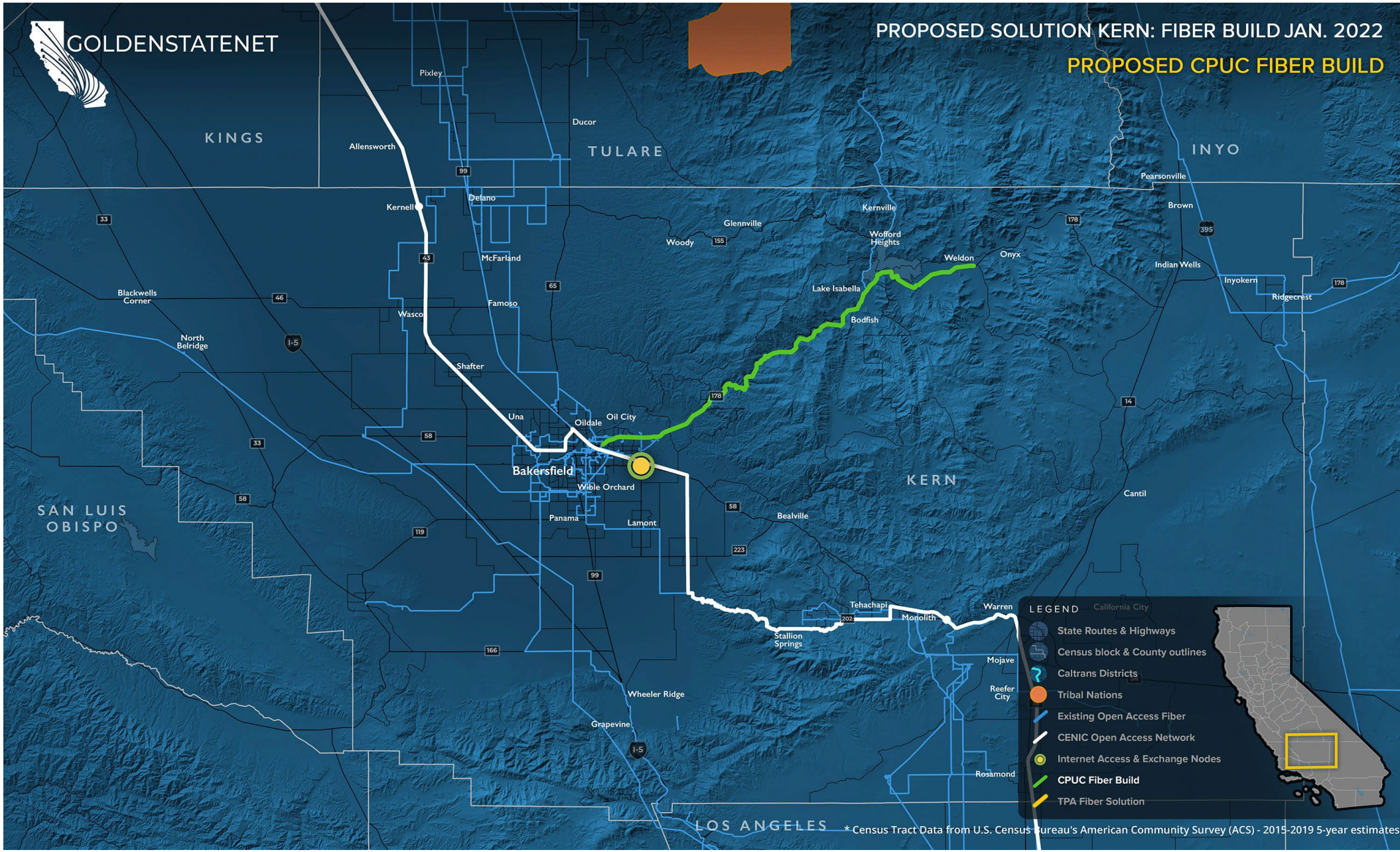
GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
PROPOSED CPUC FIBER BUILD
KINGS
TULARE
INYO
KERN
SAN LUIS OBISPO
LOS ANGELES
Pixley
Ducor
Allensworth
Kernell
Delano
Kernville
Glennville
Woody
Wofford Heights
Weldon
Onyx
Pearsonville
Brown
Indian Wells
Inyokern
Ridgecrest
Lake Isabella
Bodfish
McFarland
Famoso
Wasco
Blackwells Corner
North Belridge
Shafter
Una
Oildale
Oil City
Bakersfield
Wible Orchard
Panama
Lamont
Bealville
Cantil
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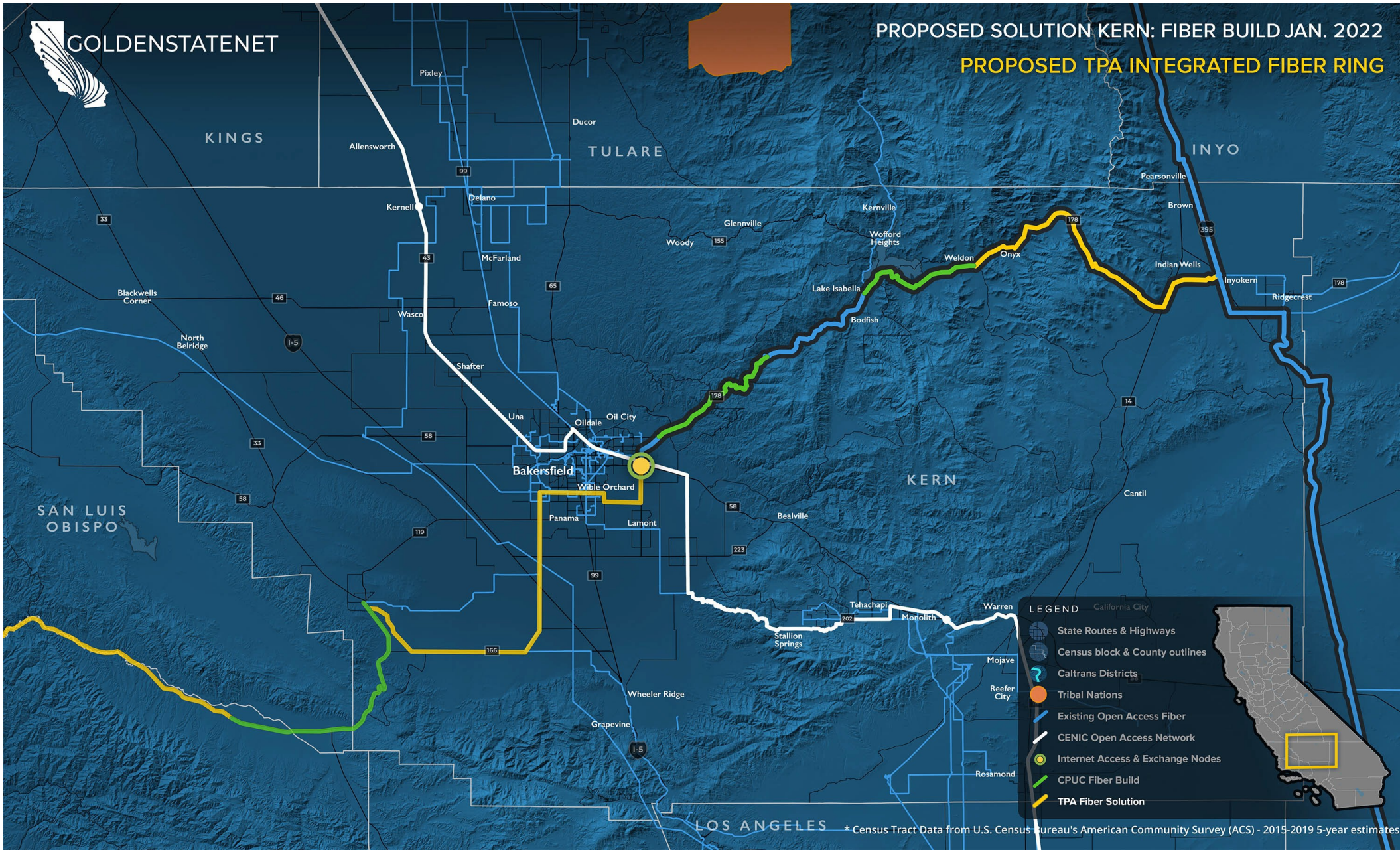
GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
PROPOSED TPA INTEGRATED FIBER RING
KINGS
TULARE
INYO
KERN
SAN LUIS OBISPO
LOS ANGELES
Pixley
Ducor
Allensworth
Kernell
Delano
McFarland
Famoso
Wasco
Blackwells Corner
North Belridge
Shafter
Una
Oildale
Oil City
Bakersfield
Wible Orchard
Panama
Lamont
Bealville
Cantil
Glennville
Woody
Kernville
Wofford Heights
Weldon
Onyx
Lake Isabella
Bodfish
Pearsonville
Brown
Indian Wells
Inyokern
Ridgecrest
Tehachapi
Monolith
Warren
Stallion Springs
Mojave
Reefer City
Rosamond
Wheeler Ridge
Grapevine
I-5
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178
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395
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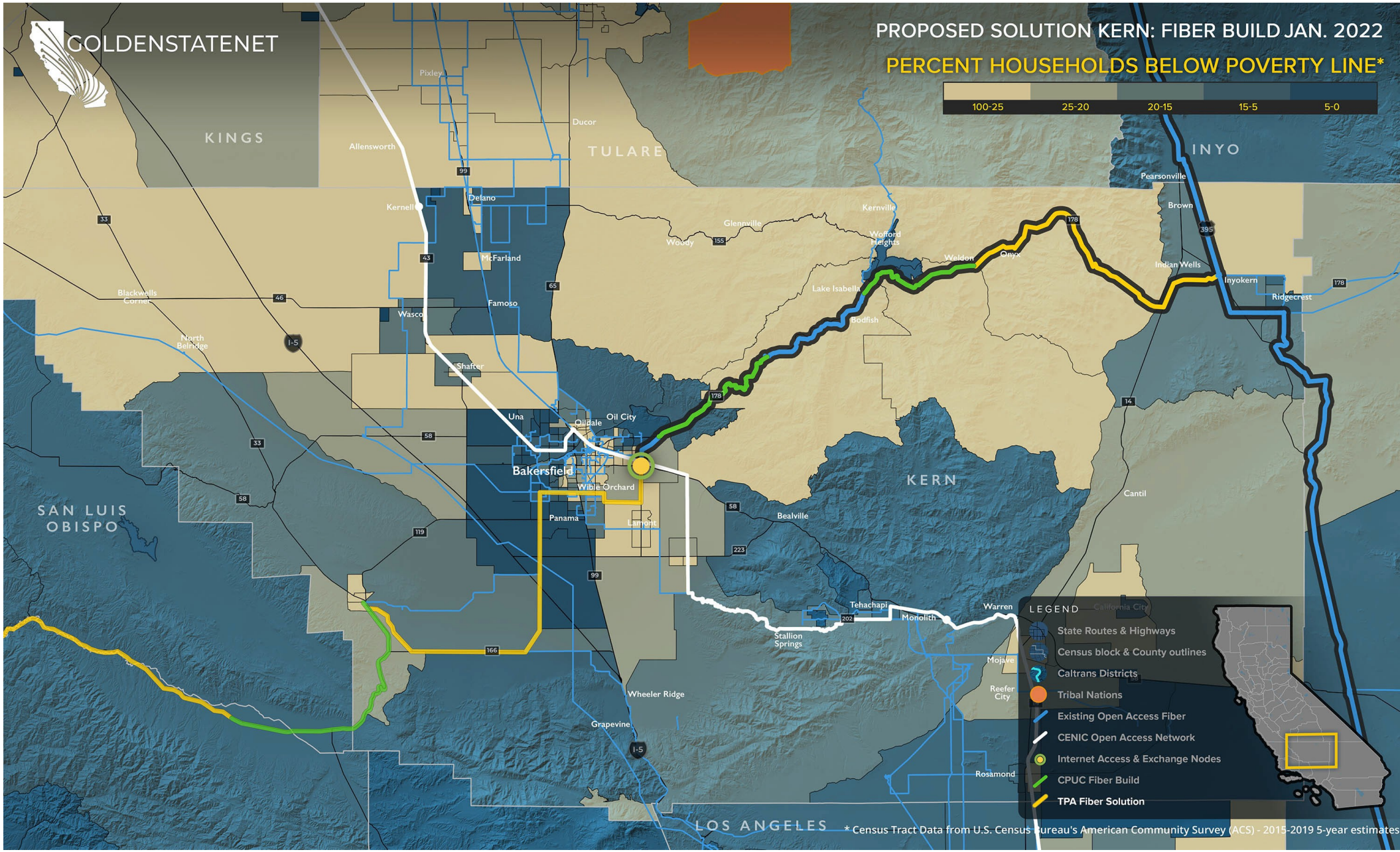
GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
PERCENT HOUSEHOLDS BELOW POVERTY LINE*
100-25
25-20
20-15
15-5
5-0
KINGS
TULARE
INYO
KERN
SAN LUIS OBISPO
LOS ANGELES
Pixley
Ducor
Allensworth
Kernell
Delano
McFarland
Famoso
Wasco
Blackwells Corner
North Belridge
Shafter
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Oildale
Oil City
Bakersfield
Wible Orchard
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Lamont
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Cantil
Kernville
Glenville
Woody
Wofford Heights
Weldon
Onyx
Lake Isabella
Bodfish
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Brown
Indian Wells
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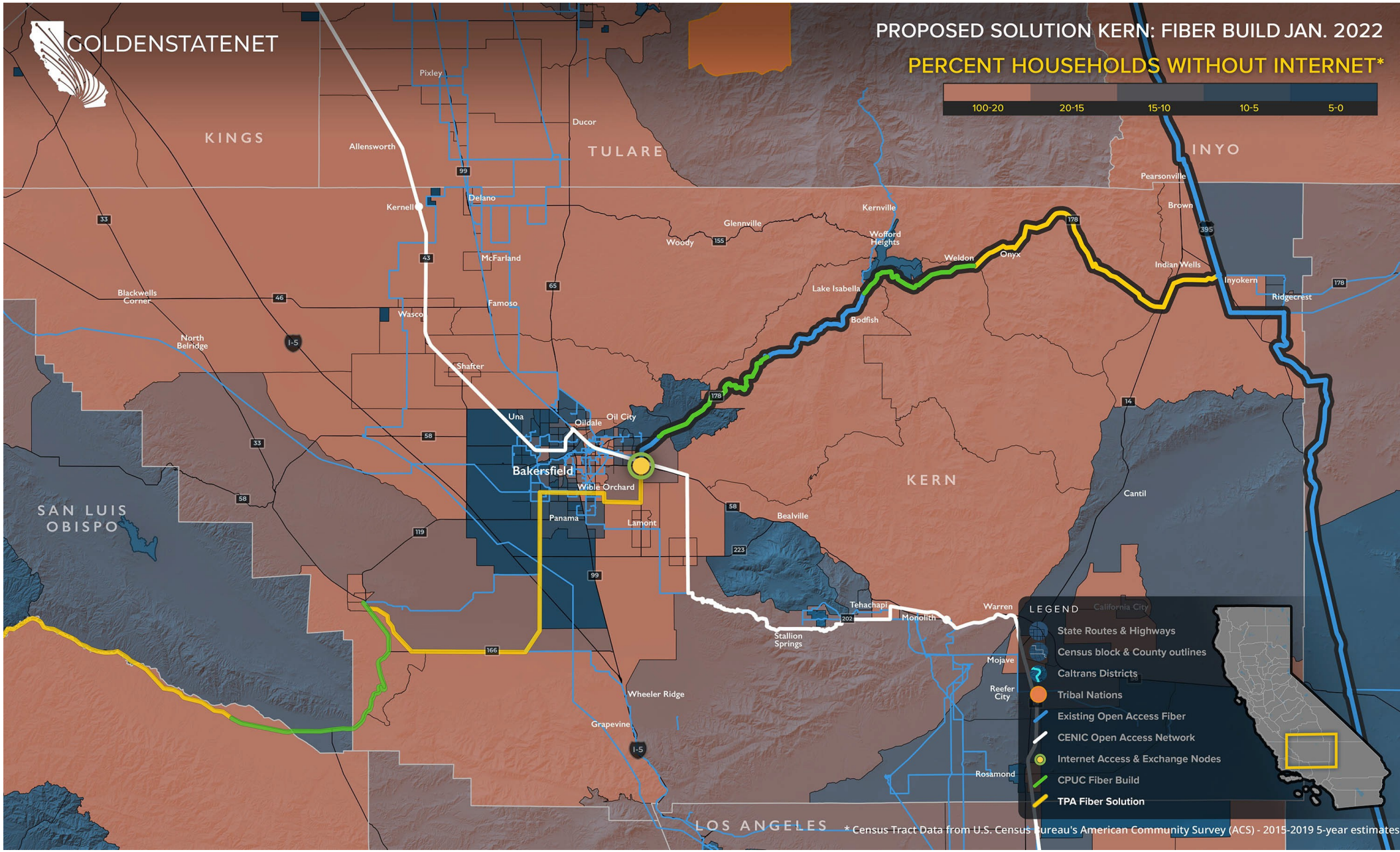
GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
PERCENT HOUSEHOLDS WITHOUT INTERNET*
100-20
20-15
15-10
10-5
5-0
KINGS
TULARE
INYO
KERN
SAN LUIS OBISPO
LOS ANGELES
Pixley
Ducor
Allensworth
Kernell
Delano
McFarland
Famoso
Wasco
Blackwells Corner
North Belridge
Shafter
Una
Oildale
Oil City
Bakersfield
Wible
Orchard
Panama
Lamont
Bealville
Tehachapi
Stallion Springs
Warren
Monolith
California City
Cantil
Mojave
Reefer City
Rosamond
Wheeler Ridge
Grapevine
Glennville
Woody
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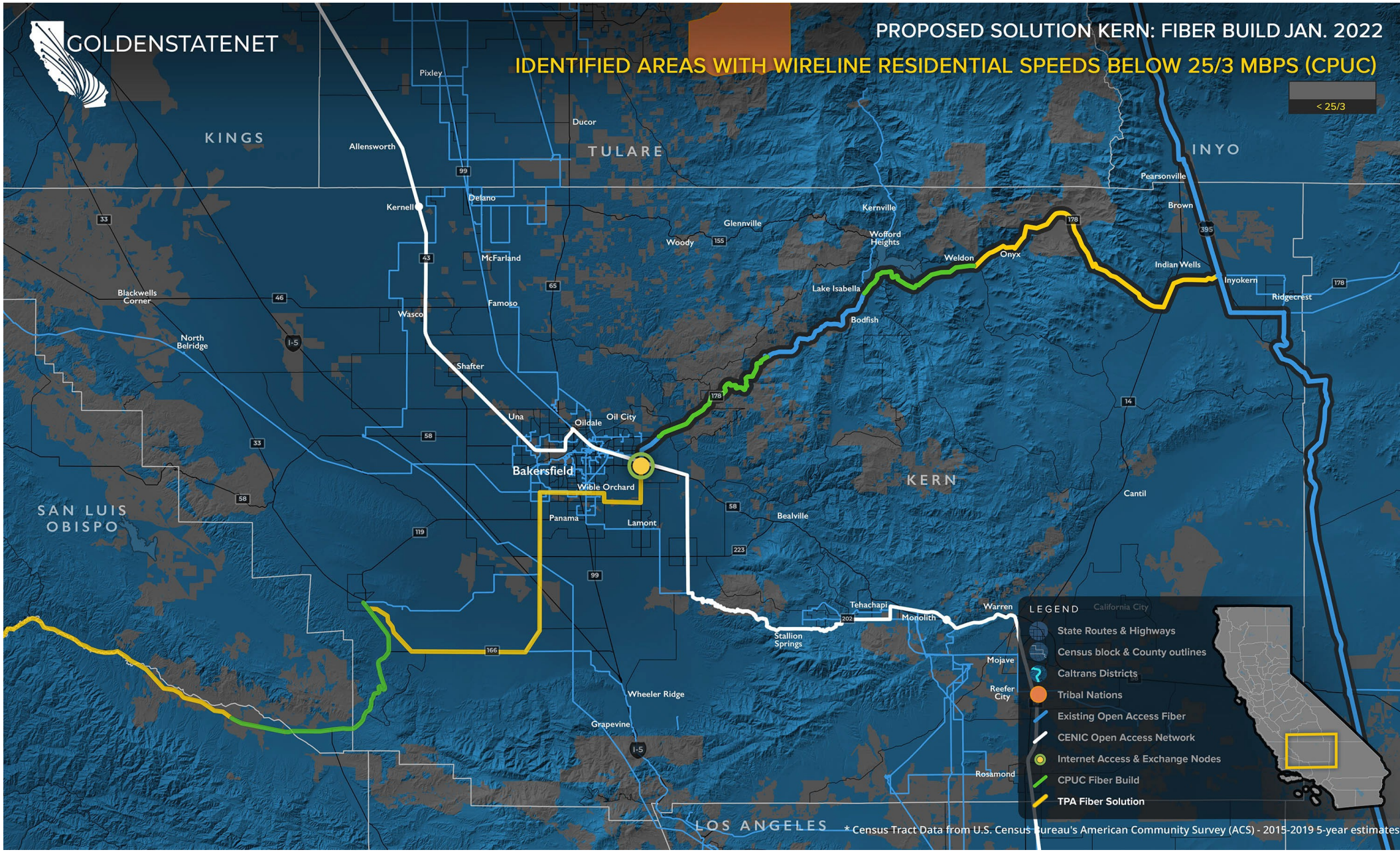
GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
IDENTIFIED AREAS WITH WIRELINE RESIDENTIAL SPEEDS BELOW 25/3 MBPS (CPUC)
< 25/3
KINGS
TULARE
INYO
KERN
SAN LUIS OBISPO
LOS ANGELES
Pixley
Ducor
Allensworth
Kernell
Delano
McFarland
Wasco
Famoso
Blackwells Corner
North Belridge
Shafter
Una
Oildale
Oil City
Bakersfield
Wible Orchard
Panama
Lamont
Bealville
Cantil
Glennville
Woody
Kernville
Wofford Heights
Weldon
Onyx
Lake Isabella
Bodfish
Pearsonville
Brown
Indian Wells
Inyokern
Ridgecrest
Tehachapi
Monolith
Warren
Stallion Springs
Mojave
Reefer City
Rosamond
Wheeler Ridge
Grapevine
I-5
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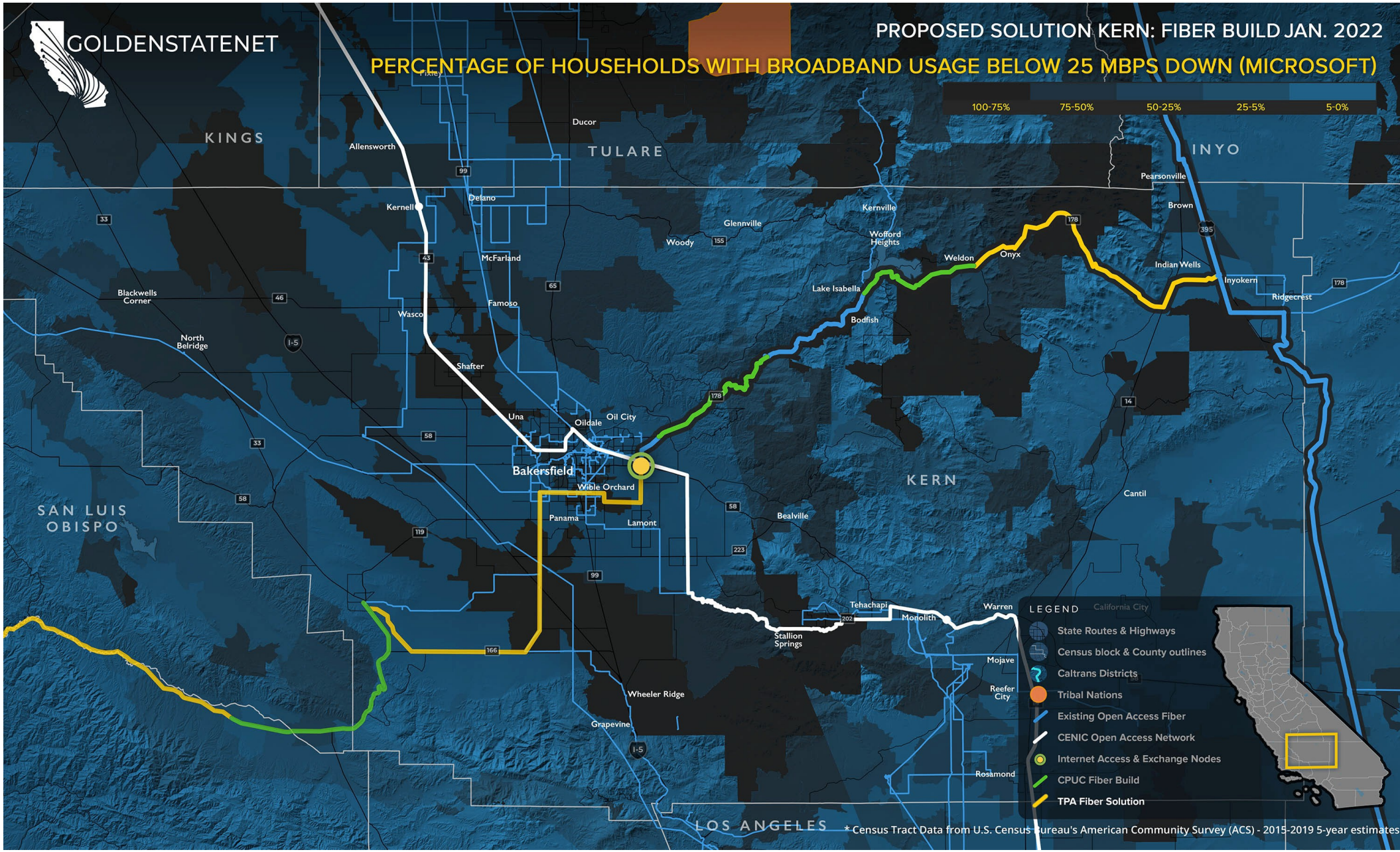
GOLDENSTATENET
PROPOSED SOLUTION KERN: FIBER BUILD JAN. 2022
PERCENTAGE OF HOUSEHOLDS WITH BROADBAND USAGE BELOW 25 MBPS DOWN (MICROSOFT)
100-75%
75-50%
50-25%
25-5%
5-0%
KINGS
TULARE
INYO
KERN
SAN LUIS OBISPO
LOS ANGELES
Ducor
Allensworth
Pixley
Kernell
Delano
McFarland
Wasco
Famoso
Shafter
Blackwells Corner
North Belridge
Una
Oildale
Oil City
Bakersfield
Wible Orchard
Panama
Lamont
Bealville
Cantil
Glennville
Woody
Kernville
Wofford Heights
Weldon
Onyx
Lake Isabella
Bodfish
Pearsonville
Brown
Indian Wells
Inyokern
Ridgecrest
Tehachapi
Monolith
Warren
Stallion Springs
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* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates

Data Sources*

- American Community Survey - Internet Connectivity
- American Community Survey - Poverty Status
- California 2020 Legislative District Boundaries
- California Broadband Availability Maps and GIS Data
    - 20 Layers used from combined database
- California Census Blocks
- California Census Tracts
- California Counties
- California Fire Hazard Severity Zones
- California National Highway System
- California Major Lakes and Reservoirs
- California Parks Land
- California State Highway Network (SHN)
- California Tribal Lands
- CalTrans Juridictions
- CENIC Digital Fiber Segments
- CPUC Fixed Served Status
- Existing Open Access Networks - Under NDA
- FCC Fixed Consumer Deployment
- Microsoft Broadband Usage Percentages Dataset
- Ookla Test Data Results by Census Tract
- Technology Use Demographics (e.g. Internet use in home) by Census Tract

**All data was published between 2019 - 2021 and represents the most current data available. Not all layers are represented on the maps above. However, the data was utilized as a part of the development process.*

GOLDENSTATENET